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RETAIL / OFFICE COMPLEX

ENVIRONMENTAL IMPACT REPORT

December 1992

91.159E

DRAFT EIR PUBLICATION DATE: December 31, 1992
DRAFT EIR PUBLIC HEARING DATE: February 11, 1993
DRAFT EIR PUBLIC COMMENT PERIOD: December 31, 1992 to February 16, 1992

Written comments should be sent to the Environmental Review Officer
450 McAllister Street, Sixth Floor, San Francisco, CA 94102

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DATE: December 31, 1992

TO: Distribution List for the Pacific Center Retail/Office Complex Draft EIR

FROM: Barbara W. Sahm, Environmental Review Officer

SUBJECT: Request for the Final Environmental Impact Report for the Pacific Center Retail/Office Complex Project

---

This is the Draft of the Environmental Impact Report for the Pacific Center Retail/Office Complex project. A public hearing will be held on the adequacy and accuracy of this document. After the public hearing, our office will prepare and publish a document titled "Summary of Comments and Responses" which will contain a summary of all relevant comments on this Draft EIR and our responses to those comments. It may also specify changes to this Draft EIR. Those who testify at the hearing on the draft will automatically receive a copy of the Comments and Responses document along with notice of the date reserved for certification; others may receive such copies and notice on request or by visiting our office. This Draft EIR together with the Summary of Comments and Responses document will be considered by the City Planning Commission in an advertised public meeting and certified as a Final EIR if deemed adequate.

After certification, we will modify the Draft EIR as specified by the Comments and Responses document and print both documents in a single publication called the Final Environmental Impact Report. *The Final EIR will add no new information to the combination of the two documents except to reproduce the certification resolution.* It will simply provide the information in one rather than two documents. Therefore, if you receive a copy of the Comments and Responses document in addition to this copy of the Draft EIR, you will technically have a copy of the Final EIR.

We are aware that many people who receive the Draft EIR and Summary of Comments have no interest in receiving virtually the same information after the EIR has been certified. To avoid expending money and paper needlessly, we would like to send copies of the Final EIR to private individuals only if they request them.

If you want a copy of the Final EIR, please so indicate in the space provided on the next page and mail the request to the Office of Environmental Review within two weeks after certification of the EIR. Any private party not requesting a Final EIR by that time will not be mailed a copy. Public agencies on the distribution list will automatically receive a copy of the Final EIR.

Thank you for your interest in this project.

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Department of City Planning
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Attn: Paul Maltzer, EIR Coordinator
91.159E - Pacific Center Retail/Office Complex

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REQUEST FOR FINAL ENVIRONMENTAL IMPACT REPORT

TO: Department of City Planning
Office of Environmental Review

Please send me a copy of the Final EIR.

Signed: ____

Print Your Name and Address Below

PACIFIC CENTER
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INTRODUCTION

This Environmental Impact Report (EIR) evaluates the potentially significant environmental effects associated with the proposed Pacific Center Retail/Office Complex project. The analyses contained herein address project-specific and cumulative impacts to which the project would contribute.

This EIR, for the purposes of impact analysis, evaluates the effects of development on three distinct portions of the site, referred to as Pacific I (the existing Pacific Building at the southwest corner of Market and Fourth Streets), Pacific II (the existing 22 Fourth Street building) and Pacific III (the loading and service docks area located between Jessie Street and 22 Fourth Street).

An earlier development proposal for this site was evaluated in 1980 (Pacific Apparel Mart Building Final EIR, Case No. EE 80.315, certified March 26, 1981), and approved by the City Planning Commission on March 26, 1981. That project, which was never built, proposed to develop a 30-story tower with about 332,000 square feet (sq. ft.) of apparel mart space at the Pacific III location. That Pacific III addition to the existing Pacific I building and Pacific II building (under construction at that time), would have resulted in a development containing a total of about 862,000 sq. ft. of apparel mart space.

This EIR incorporates information from previously published Program EIRs. Most of this information is related to cumulative impacts of downtown growth contained in the *Mission Bay EIR* (Case No. 86.505EMZT, Final EIR certified August 23, 1990), *South of Market Plan EIR* (Case No. 85.463E, Final EIR certified December 7, 1989) and the *Downtown Plan EIR* (Case No. EE81.3, Final EIR certified October 18, 1984). The *Mission Bay EIR* covers the impacts of potential development in a 300-acre area just south of the greater downtown, from Townsend Street to Mariposa Street, east of the I-280 freeway. The *South of Market Plan EIR* analyzes impacts of development under the *South of Market Plan* development controls and alternatives in the area generally south of Mission Street to the Mission Bay planning area and east of U.S. 101 to the Rincon Hill area east of Second Street. The *Downtown Plan EIR* analyzes the impacts of various development policy alternatives in the C-3 (Downtown) zoning districts of San Francisco.

The *Mission Bay* and *South of Market Plan EIRs* include the most current estimates of employment growth for the Downtown & Vicinity and for the rest of the City; revised analysis and conclusions regarding overall cumulative transportation impacts in the future; and new cumulative air quality information. (The term "Downtown & Vicinity" means the C-3 District and the areas around it: South of Market, Mission Bay, South Van Ness, Civic Center, and the Northeastern Waterfront. See *Mission Bay EIR*, Vol. II, pp.IV.4-5.) The *Downtown Plan EIR* contains other cumulative impact information regarding such topics as energy consumption, community services and seismic effects that also is applicable to the Pacific Center project.

Where information from these area-wide EIRs is presented in this project EIR, incorporation by reference with a summary is used pursuant to CEQA Sections 21061 and 21100 (see also CEQA Guidelines Section 15150). Documents incorporated by reference are available for public review at the San Francisco Department of City Planning, 450 McAllister Street, San Francisco; the San Francisco Main Library and various branch libraries.

I. SUMMARY

A. PROJECT DESCRIPTION

The Ahmanson Commercial Development Company proposes to build a vertical retail and office complex at the southwest corner of Market and Fourth Streets, through new construction and renovation of existing buildings. The proposed project would contain about 477,000 square feet (sq. ft.) of retail space, 108,000 sq. ft. of office space, 19,000 sq. ft. of public open space, and about 98,000 sq. ft. of parking, loading and mechanical space, for a total development of about 702,000 sq. ft. The project site is composed of Lots 1, 46 and 47 in Assessor's Block 3705. The project architect is Whisler-Patri.

The project would include the following components: architectural rehabilitation and seismic reinforcement of the historic Pacific Building facades along Market and Fourth Streets (Pacific I); demolition of the interiors of the Pacific Building and the 22 Fourth Street building (Pacific II); reconstruction of Pacific I and II interiors including alignment of floorplates; construction of a ten-story building on Jessie Street (Pacific III), connected internally to Pacific II; and modification of an existing two-level basement parking garage and loading area. The project would integrate the Pacific I, II and III portions of the site into a single complex, organized around a seven-story skylighted courtyard in Pacific I.

The project site is in the C-3-R (Downtown Retail) Use District and in the 120-X and 160-S Height and Bulk Districts. The basic permitted floor area ratio (FAR) in the C-3-R district is 6:1; the maximum allowable FAR including transferable development rights (TDR) is 9:1. The overall FAR of the proposed project would be 9:1, and would require approximately 80,000 sq. ft. of TDR.

Project construction would take about 24-28 months; total construction cost would be about $60,000,000 (1991 dollars). Project completion and initial occupancy is anticipated for late 1994 or early 1995.

B. MAIN ENVIRONMENTAL EFFECTS

ARCHITECTURAL AND HISTORIC RESOURCES (pages 69 to 70)

The Pacific Building on the project site is designated as a Category I-Significant building in the *Downtown Plan*, received an "A" rating in the Heritage Survey, was rated "4" in the 1976 Department of City Planning Architectural Inventory, is listed in the Junior League's 1968 survey *Here Today*, and appears eligible for listing on the National Register of Historic Places.

The facades of the Pacific Building would undergo architectural restoration, the interior would be demolished and reconstructed to accommodate proposed uses, and the entire structure would be seismically reinforced. Architectural restoration would include removal of dirt and inappropriately applied building materials, reparation of cracks and damaged ornamentation, and repointing open or deteriorated mortar joints.

URBAN DESIGN AND VISUAL QUALITY (pages 71 to 75)

The Pacific I and II portions of the project would primarily involve interior remodelling, and would therefore not change the scale of development in the project area or existing views currently enjoyed. The ten-story Pacific III portion of the project would be visible to pedestrians along Jessie and Fourth Streets and nearby building occupants; surrounding buildings would block most mid- and long-range views of the new tower. The gray, pre-cast concrete panel exterior of Pacific II would be stripped from the lower ten floors, and replaced with a facade design integrated with the new Pacific III structure, such that Pacific II and III would read as one building. A combination of granite cladding with bronze framed windows would be used at the base, and GFRC (Glass Fibre Reinforced Concrete) cladding with granite accents, aluminum framed windows and decorative grilles would be used at the upper levels. The selection of materials and design is intended to relate in proportion, rhythm, level of detail and color to the existing facades of the Pacific Building. The project architect has described the style of proposed Pacific II and III facades as "classically inspired modernist."

SHADOW, WIND AND TELEVISION RECEPTION (pages 76 to 87)

The project would cast no new shadow on any Recreation and Park Department property during the hours defined by the Sunlight Ordinance and would thus comply with the ordinance. The project would cast a small amount of new shadow in streets, sidewalks and on buildings in the project area.

A wind simulation for the project site indicates that wind speeds currently exceed, by one to two mph, the 11 mph equivalent wind speed pedestrian comfort criterion established in the *Downtown Plan* at five of the 11 locations tested. The project would cause wind speeds to decrease at three of the 11 locations, be unchanged at three locations, and increase at five locations. With the project, the 11 mph pedestrian comfort criterion would continue to be exceeded at five test locations by one to two mph. The hazard criterion would not be violated at any of the test locations with the project.

Although difficult to predict with certainty the project's potential effects on television reception at the Victorian Hotel, some reduction in signal strength could occur as a result of the proposed project. The project sponsor has agreed to provide an appropriate level of mitigation should it be necessary.

TRANSPORTATION (pages 88 to 115)

The project would generate approximately 49,630 daily person trips on a typical (non-holiday) weekday, 72,680 daily person trips on a typical weekend, 56,040 daily person trips on a holiday (Thanksgiving to Christmas) weekday, and 119,220 daily person trips on a holiday weekend. The portion of these total daily trips occurring during the peak hour periods would be as follows: about 5,705 typical weekday midday (12:00-2:00 p.m.) peak hour trips, 4,505 typical weekday P.M. (4:00-6:00 p.m.) peak hour trips, and 7,170 typical weekend midday peak hour person trips, and 7,340 holiday weekday midday peak hour trips, 5,635 holiday weekday P.M. peak hour trips, and 14,900 holiday weekend midday peak hour trips. The portion of these peak hour trips that would be auto trips would be as follows: about 905 during a typical weekday P.M. peak hour, 1,790 during a typical weekend midday peak hour, 1,230 during a holiday weekday P.M. peak hour, and 2,885 during a holiday weekend midday peak hour.

Both the *Mission Bay* and *South of Market Plan EIRs* show that by year 2000, congested highway conditions caused by cumulative regional development would result in a shift from autos to higher use of transit and ridesharing by travelers from the Downtown & Vicinity. The East Bay would be the most congested corridor, the Peninsula would be the least. To serve regional growth, expanded transit and freeway systems would be required.

During the P.M. peak hour in 1991, most of the local and regional public transit services were found to be operating at Level of Service (LOS) D or better. The exception was the Southwest screenline of MUNI, where conditions were found to be at LOS E. Table C-4, Appendix C, contains descriptions of the various LOS for transit. In year 2000 with cumulative growth, most of the transit services would continue to operate at LOS D or better during the P.M. peak hour. The exceptions would be the Southwest screenline of MUNI, where conditions would degrade to LOS F, and BART East Bay, where conditions would degrade to LOS E.

In the P.M. peak hour in year 2000, about 540 (0.02 percent of existing trips) new MUNI trips among all four of the MUNI screenlines would be generated by the project. Addition of the P.M. peak hour MUNI riders, which in total would not be inconsequential, would incrementally increase the loading ratios across all of the screenlines once they dispersed among the numerous routes within those corridors. MUNI operates at a financial loss providing service in the downtown. The cost of MUNI ridership generated by the project would not be offset by the requirement of fees, such as those required by the Transit Impact Development Fee (TIDF) ordinance, because the TIDF only applies to net increases in office space (the project proposes a net reduction in office space).

Addition of BART riders from the project site to existing BART ridership would also incrementally increase P.M. peak hour Transbay and westbay loading ratios in year 2000, but not change LOS. Existing and year 2000 P.M. peak hour BART ridership would be increased by less than 0.1 percent. A ridership increase of this magnitude would not be measurable against the day-to-day fluctuations in transit ridership. Similar to MUNI, however, BART also operates at a cost deficit, which would increase with additional riders generated by the project. BART's operating deficit per passenger is likely to decline in real terms as planned service improvements become operational in the future, attracting a net increase in ridership.

Traffic increases resulting from the proposed project would cause 16 instances of significant peak hour level of service deterioration at four of the six study intersections, in the existing plus project and cumulative conditions.

On non-holiday days, the proposed project would generate about 1,780 person trips during the midday weekday peak 15-minute period, 1,410 persons trips during the weekday P.M. peak 15-minute period and 2,240 person trips during the weekend midday peak 15-minute period. On holiday days, the proposed project would generate about 2,295 person trips during the midday weekday peak 15-minute period, 1,760 persons trips during the weekday P.M. peak 15-minute period and 4,660 person trips during the weekend midday peak 15-minute period.

The project would create new parking demand of about 170 daily spaces for the office component, and between 785 and 2,885 short-term peak hours spaces for the retail component. The estimated project-generated peak hour parking demand would therefore range from about 955 on a non-holiday weekday midday, to about 2,885 on a holiday weekend midday. The project would provide about 39,075 gross square feet of parking area, which the Department of City Planning estimates could accommodate 130 vehicles with tandem valet operations.

On-street parking occupancy in the project area ranges from about 73 percent during the non-holiday, weekday midday peak hour, to about 95 percent during the holiday, weekend midday peak hour. The project-related vehicles not accommodated by on-street facilities (or parked illegally) would use one of the off-street parking facilities located in the project area. Current occupancy levels at the sixteen off-street parking facilities surveyed are between 60 percent during a non-holiday, weekday P.M. peak hour, to about 91 percent during a holiday, weekend midday peak hour. During all holiday peak periods, the off-street parking supply is fully utilized, and vehicles not finding parking would add to local street and intersection congestion. The project would reduce the off-street parking supply during all peak use periods year-round, although some of the demand could be accommodated by a shuttle bus service to a designated satellite parking facility, a mitigation measure proposed as part of the project.

During the projected 24-28-month construction period, transportation impacts would result from truck movements to and from the site during demolition and construction activity. Demolition would occur over a six to nine week period, and would generate an average of 40 truck movements per day in or out of the project site. Off-haul disposal would most likely occur in the city of Richmond or another East Bay location, between 9:00 a.m. and 3:30 p.m.. Access to the East Bay would occur from the I-80 freeway to the Bay Bridge, most likely from Fourth Street to Folsom Street. Construction activities (steel erection and finishing) would generate an average of 40 truck movements per day during this 21-24-month period. Deliveries of materials would occur before 7:00 a.m., after 6:00 p.m., or between 9:00 a.m. and 3:30 p.m.

Construction truck access to the site would be via Fourth and Jessie Streets. The west sidewalk on Fourth Street and the north sidewalk on Jessie Street fronting the project site would be closed for the entire 24-28 month construction period. A sidewalk barricade would be constructed in the parking lane along both streets for pedestrians. Pedestrians would be routed through a protected walkway during that period; however, sidewalk access to the Victorian Hotel adjacent to the site would not be obstructed. The curb parking lane along Fourth Street would be closed for the duration of construction. Closure of the curb lanes would result in the displacement of about 12 parking spaces and a reduction of street capacity. Any truck traffic from 7:00-9:00 a.m. or from 4:00-6:00 p.m. would coincide with peak-hour traffic, and would worsen service levels.

The effects of construction truck traffic would be a reduction of access street and haul route capacities, due to the slower movements and larger turning radii of trucks. The reduction in capacity would slow movement of traffic, including MUNI buses along haul routes. Lane blockage on Fourth Street by queued trucks, if queuing occurred, would reduce the capacity of this street and interfere with the operation of transit vehicles. MUNI lines that could be affected include lines 9X, 16X, 30, 45, and 73, and a MUNI curb stop along Fourth Street. Lane and sidewalk closures are subject to review and approval by the San Francisco Department of Public Works and MUNI.

AIR QUALITY (pages 116 to 121)

Project-related vehicular traffic would add to cumulative regional pollutant emissions, and contribute to the continued failure of the Bay Area to attain federal ozone and carbon monoxide (CO) standards. Project-related traffic alone would contribute less than one percent of the traffic-related emissions resulting from development in San Francisco County, and thus would not pose a potentially significant effect on air quality. However, emissions of particulates and NO_x generated by the project, together with cumulative development, would increase particulate and NO_x concentrations, which would increase the frequency of fine particulate matter (PM_{10}) and NO_x standard violations in San Francisco, with concomitant health effects and reduced visibility.

In the year 2000, however, the proposed project itself would generate emissions of NO_x and particulates in excess of 150 lbs/day, considered a significant air quality impact by the BAAQMD.

In 1991, the eight-hour CO standards were violated in the project vicinity at three of the six intersections studied. Exceedances of the CO standard at these intersections would occur under existing conditions with or without the project, however, the project would tend to intensify the problem. Cumulative vehicle traffic would not cause violations at any of the study intersections. Local CO concentrations are predicted to be less in 2000 than in 1991 (the base year for project impacts), because the effects of emission controls on new vehicles would offset increases in traffic volumes and congestion.

CONSTRUCTION NOISE (pages 122 to 126)

Project construction would temporarily increase noise levels in the area of the site during the 24-to 28-month construction period. Highest average construction noise levels experienced in hotels rooms or office and stores near the site could interfere with rest and speech. Operation of construction equipment could temporarily raise the noise level up to 83 dBA with windows open and 73 dBA with windows closed in adjacent buildings. Should more than one building in the project area be under construction at the same time as construction of the project, noise levels would be expected to increase by another two to five dBA. The project would not require the use of pile driving.

EMPLOYMENT (pages 127 to 129)

The project would accommodate about 1,800 net new employees in the C-3 District. About 2,100-5,900 additional jobs in the Bay Area would result from the employment multiplier effect of project operation. The project would require about 243 person-years of construction labor. About 300-625 additional person-years of employment would be generated in the Bay Area as a result of the multiplier effect of project construction.

GROWTH INDUCEMENT (pages 130 to 131)

Increases in downtown retail space and reoccupation of downtown office, occurring as a result of the proposed project, would contribute to growth of local and regional markets for housing, goods and services. Although employment growth would not be reflected directly in increases in demand for housing and City services to residents, it is expected that some downtown workers would want to live in San Francisco, intensifying the demand for housing, retail goods and services. The project would be built in a developed urban area, and would require no expansion to municipal infrastructure not already under construction.

SEISMICITY (pages 132 to 134)

The project site, like San Francisco and the Bay Area in general, is subject to ground shaking from potentially large earthquakes on the San Andreas and Hayward faults, as well as on other faults in the region. Increases in employment and public use at the site that would occur as a result of the project would result in a larger number of people being exposed to seismic hazards, compared to existing conditions, if an earthquake occurred during the day. New buildings, including the Pacific III portion of the proposed Pacific Center retail and office complex, are subject to more stringent building and structural standards than older buildings. The 1907 Pacific Building (Pacific I) would be seismically upgraded as part of the project. Persons using the site after the proposed development would likely be relatively safer than those using the site in its present condition in the event of a major earthquake.

C. MITIGATION MEASURES (pages 135 to 141)

Some of the measures identified that would mitigate potentially significant environmental effects are presented below. A full recitation of mitigation measures proposed as part of the project or proposed for consideration are presented on pages 135 to 141. Mitigation measures preceded by an asterisk (*) are from the Initial Study (see Appendix A, pages A-1-41).

MEASURES PROPOSED AS PART OF THE PROJECT

The project sponsor would provide shuttle bus service between a designated satellite parking facility and the project site. The parking facility would be located by the Project sponsor and leased areas negotiated.

The project sponsor would, in consultation with the Municipal Railway, install eyebolts or make provisions for direct attachment of eyebolts for MUNI trolley wires on the proposed building wherever necessary. The sponsor may agree to waive the right to refuse the attachment of eyebolts to the proposed building if such attachment is done at City expense. (The Municipal Railway Five-Year Plans identify existing and proposed routes.) Prior to installation of any eyebolts on the historic Pacific Building, the project sponsor or MUNI shall consult with the Landmarks Preservation Advisory Board (LPAB).

When the building is 80% occupied, the sponsor shall conduct a survey, in accordance with methodology approved by the Department of City Planning, to assess actual trip generation patterns of project occupants and actual pick-up and drop-off areas for carpools and vanpools. The project sponsor would make this survey available to the Department of City Planning. This measure would provide needed information to aid in transportation planning within the City. Alternatively, at the request of the Department of City Planning, the sponsor would provide a fair and equitable in lieu contribution toward an overall transportation survey for the downtown area to be conducted by the Department of City Planning.

The project sponsor shall: 1) participate with other project sponsors and/or the San Francisco Parking Authority in undertaking studies of the feasibility of constructing an intercept commuter parking facility in a location appropriate for such facility to meet the unmet demand for parking for those trips generated by the project which cannot reasonably be made by transit, and 2) participate with other project sponsors and/or the Municipal Railway in studies of the feasibility of the establishment of a shuttle system serving the project site and the parking facility.

A member of the building management staff would be designated as a transportation broker to coordinate measures that are part of a transportation management program, such as: encouraging a flexible time system for employee working hours (to be developed by project tenants in consultation with the Department of City Planning) to reduce peak-period congestion by a planned spreading of employee arrivals and departures; encouraging transit use through the on-site sale of BART, MUNI, and other carriers' passes to employees; and encouraging employee carpool and vanpool systems in cooperation with RIDES for Bay Area Commuters by providing a central clearinghouse for carpool and vanpool information.

Off-street parking spaces would be controlled to assure priority for vehicles driven by the physically handicapped, and vanpool and carpool vehicles. All remaining parking spaces within the Pacific Center project would be subject to rates that encourage short-term use of said spaces and discourage all-day parking; the parking rate would be reviewed and approved by the Department of City Planning, or alternatively, the project sponsor would agree to be bound by a formula, to be developed by the Department of City Planning, which structures rates so as to favor short-term parking.

During the construction period, construction truck movement would be minimized between 7:00 a.m. to 9:00 a.m. and 3:30 p.m. to 6:00 p.m. to minimize peak-hour traffic conflicts and to accommodate queuing of MUNI buses prior to the peak hours. The project sponsor and construction contractor would meet with the Traffic Engineering Division of the Department of Parking and Traffic, the Fire Department, MUNI and the Department of City Planning to determine feasible traffic mitigation measures to reduce traffic congestion during construction of this project and other nearby projects. To minimize cumulative traffic impacts due to lane closures during construction, the general contractor would coordinate with construction contractors for any concurrent nearby projects that are planned for construction or which later became known.

* The project sponsor would require the general contractor to sprinkle demolition sites with water continually during demolition activity; sprinkle unpaved construction areas with water at least twice per day to reduce dust generation by about 50 percent; cover stockpiles of soil, sand and other such material; cover trucks hauling debris, soil, sand or other such materials; and sweep streets surrounding demolition and construction sites at least once per day to reduce particulate emissions. The project sponsor would require the general contractor to maintain and operate construction equipment so as to minimize exhaust emissions of particulate and other pollutants, by such means as prohibition of idling motors when equipment is not in use or when trucks are waiting in queues, and implementation of specific maintenance programs (to reduce emissions) for equipment that would be in frequent use for much of the construction period.

The project sponsor would require the general contractor to construct barriers around the site, and around stationary equipment such as compressors, which would reduce construction noise by as much as five dBA, and to locate stationary equipment in pit areas or excavated areas, as these would serve as noise barriers.

* An evacuation and emergency response plan would be developed by the project sponsor or building management staff, in consultation with the Mayor's Office of Emergency Services,

to ensure coordination between the City's emergency planning activities and the project's plan, and to provide for building occupants in the event of an emergency. The project's plan would be reviewed by the Office of Emergency Services and implemented by building management insofar as feasible before issuance of final building permits by the Department of Public Works.

* To expedite implementation of the City's emergency response plan, the project sponsor would prominently post information for building occupants concerning what to do in the event of a disaster.

* A preliminary inspection of the existing buildings for asbestos has been made, and a final report will be prepared. Included in the final report would be a plan for the safe removal and disposal of any asbestos found in the buildings exceeding allowable levels under applicable State law. A copy of this report would be submitted to the Bay Area Air Quality Management District (BAAQMD), and any other appropriate State agency, and evidence of this submittal transmitted to the Department of City Planning before the commencement of asbestos abatement. The project sponsor would comply with applicable State law regulating asbestos removal and disposal.

Coordinate work schedules of Pacific Gas and Electric Company and other utilities requiring trenching, so that street disruption would take place during weekends and off-peak hours. This should be done through the San Francisco Committee for Utility Liaison on Construction and Other Projects (CULCOP). In-street utilities could be installed at the same time as the street is opened for construction of the project to minimize street disruption.

The City could act upon or endorse the implementation of transportation mitigations described in the *Mission Bay EIR* Vol. II, Section VI.E, Mitigation, pp. VI.E.214-VI.E.217 for the year 2000 and VI.E.224-VI.E.231 for 2020, and in the *South of Market EIR*, pp. 189-194. The measures for the year 2000 include: constructing and maintaining rail rapid transit lines from downtown San Francisco to suburban corridors and major non-downtown centers in San Francisco; increased funding for Vehicle Acquisition Plans for San Francisco and regional transit agencies to expand existing non-rail transit service; providing exclusive transit lanes on City streets and on freeways; reducing incentives to drive by discouraging long-term parking; encouraging carpools, vanpools, and bicycle use; improving pedestrian circulation within downtown San Francisco; and providing transportation brokerage services. The *Mission Bay EIR* describes various types of measures to illustrate the magnitude of improvements needed to mitigate the impacts of regional growth in 2020.

Some of the implementing actions would require approval by decision-makers outside the City and County of San Francisco; many of the measures would require action by City agencies other than the City Planning Commission, such as the San Francisco Public Utilities Commission and/or Board of Supervisors. All except such things as providing transportation brokers would require funding from or approval by MTC. These measures are system-wide measures that must be implemented by public agencies. Other than project-specific measures such as the relevant transportation mitigation measures described above as part of the project, which contribute indirectly to implementation of these system-wide measures, it is not appropriate to impose mitigation at system-wide levels on individual projects.

D. ALTERNATIVES TO THE PROPOSED PROJECT (pages 144 to 165)

ALTERNATIVE A: NO PROJECT

This alternative would entail no change to the site. The proposed project would not be built. The existing Pacific I and II building would be retained. If the No Project Alternative were implemented, none of the impacts associated with the project would occur. This alternative would preserve the option to develop a similar or different type of project on the site in the future. A variant of this alternative would include seismic reinforcement of the Pacific Building (Pacific I), which was damaged in the 1989 Loma Prieta earthquake and subsequently yellow-tagged (limited access, dangerous conditions believed to be present) by the San Francisco Bureau of Building Inspection. Under the No Project Alternative, architectural restoration of the Pacific Building on the site would not occur.

ALTERNATIVE B: ALTERNATE MIX PROJECT

This alternative would have the same types of uses and the same total gross square feet of development as the proposed project, but with less retail space and more office space. Under this alternative there would be about 231,000 sq. ft. of retail space and 378,000 sq. ft. of office space; open space and parking, loading and mechanical space would be the same as the proposed project. The FAR of this alternative would be 9:1 (the same as the proposed project), and would be achieved by the use of approximately 80,000 sq. ft. of transferable development rights (TDR) from an as yet unidentified site in the C-3 district.

The building envelope of this alternative would be the same as with the proposed project. Therefore, the following effects (described in Chapter IV. Environmental Impacts, pages 69 to 134) would be the same as with the project: visibility of this alternative in near-, mid- and long-range views; wind speeds on sidewalks adjacent to the site; additional shadows on streets and sidewalks; and the relationship of the alternative to the existing urban design context. Architectural restoration of the Pacific Building facades and seismic reinforcement of the entire Pacific I structure would be the same as under the proposed project. Construction noise and construction air quality impacts for this alternative would be the same as with the proposed project, as the construction duration would be about the same.

This alternative would generate fewer overall vehicle trips than the proposed project. There would be approximately 561 typical weekday P.M. peak hour (5:00-6:00 p.m.) trips, 959 typical weekend midday peak hour (12:00-1:00 p.m.) trips, 765 holiday (Thanksgiving to Christmas) weekday P.M. peak hour trips, and 1,571 holiday weekend midday peak hour trips. Consequently, traffic and air quality effects on local intersections and anticipated parking demand would be correspondingly lower under this alternative.

This alternative would accommodate about 2,110 workers on site (310 more than the project), consisting of about 660 retail workers (690 less than the project), 1,400 office workers (1,000 more than the project), and about 50 parking, security and maintenance workers (the same as the project).

As part of approving and implementing the *Downtown Plan*, an "annual limit" on the amount of office space that could be approved in San Francisco was established (*City Planning Code* Sections 320-324). This alternative would not be subject to the requirements of these *Code* sections, including participation in the annual "beauty contest," because it would result in a net reduction of office space on the site.

ALTERNATIVE C: SMALLER PROJECT

This alternative considers a smaller project with the same types of uses as the proposed project, but without using TDR. The FAR of this alternative would be about 6:1, compared to 9:1 for the project. This alternative would contain about 231,000 sq. ft. of retail space, 296,000 sq. ft. of office space, 18,000 sq. ft. of open space, and about 75,000 sq. ft. of parking, loading, and mechanical space, for a total development of 623,000 gross sq. ft.

This alternative would have the same effects as the proposed project on ground-level wind speeds: three of the 11 test locations would have decreased speeds, three would remain unchanged, and increases would occur at five locations. The 11 mph comfort criteria would be exceeded at five test locations by one to two mph; the 26 mph hazard criteria would not be violated.

This alternative would include architectural restoration of the Pacific Building facades and seismic reinforcement of the entire structure as would the proposed project.

Visibility of this alternative in near-, mid- and long-range views would generally be similar to the proposed project. Existing views of the Pacific III portion of the site are blocked by intervening buildings from most vantages. The shorter height of the Pacific III portion of the project under this alternative would result in a less confined pedestrian experience along the eastern end of Jessie Street, as compared to the proposed project.

The duration of the construction period would be about 18-20 months, compared to 24-28 months under the proposed project. Consequently, construction noise and construction air quality impacts for this alternative would occur for a correspondingly shorter duration.

This alternative would generate fewer overall vehicle trips than the proposed project. There would be approximately 551 typical weekday P.M. peak hour (5:00-6:00 p.m.) trips, 963 typical weekend midday peak hour (12:00-1:00 p.m.) trips, 734 holiday (Thanksgiving to Christmas) weekday P.M. peak hour trips, and 1,578 holiday weekend midday peak hour trips. Consequently, traffic and air quality effects on local intersections and anticipated parking demand would be correspondingly lower under this alternative than for the proposed project.

This alternative would result in nine instances of significant and unavoidable level of service deterioration at four of six local study intersections, compared to 16 instances which would occur under the proposed project.

This alternative would result in a decreased project generated public transit ridership compared to the proposed project. However, the MUNI routes and Eastbay bound BART lines, projected to operate at LOS D or worse, would experience additional overcrowding over the existing condition.

The reduction in vehicle trips generated by this alternative would result in a corresponding reduction in persons walking from the off-street parking facilities in the study area to the proposed project site. This alternative would have reduced pedestrian impacts, compared to the proposed project, on the southwest and northwest corners of the Fourth Street/Mission Street intersection, the southeast corner at the Fifth Street/Mission Street intersection, the southwest and northwest corners at the Stockton Street/O'Farrell Street intersection, and on the west side of Fourth Street between Market and Mission Streets.

This alternative would accommodate about 1,800 workers on the site (the same as the project), consisting of about 660 retail workers (690 less than the project), 1,100 office workers (700 more than the project), and about 40 parking, security and maintenance workers (10 less than the proposed project).

ALTERNATIVE D: UNDERGROUND TRANSIT CONNECTION

This alternative would have the same types and amounts of uses as the proposed project, but would include an underground connection to the Powell Street BART/MUNI transit station; the connection would be similar to the existing passage between the Powell Street station and the San Francisco Shopping Centre.

This alternative would have the same environmental effects as the proposed project (described in Chapter IV. Environmental Impacts, pages 69 to 134), except for those related to Transportation and Air Quality.

By including a direct underground connection to the Powell Street BART/MUNI transit station, this alternative would provide an added incentive to use public transit over other modes of transportation. This alternative would affect project-generated pedestrian travel by reducing the auto person trips and increasing the number of public transit trips through the Powell Street BART/MUNI transit station.

This alternative would generate fewer overall vehicle trips than the proposed project. There would be approximately 780 typical weekday P.M. peak hour (5:00-6:00 p.m.) trips, 1,476 typical weekend midday peak hour (12:00-1:00 p.m.) trips, 1,059 holiday (Thanksgiving to Christmas) weekday P.M. peak hour trips, and 2,304 holiday weekend midday peak hour trips. Consequently, traffic and air quality effects on local intersections and anticipated parking demand would be correspondingly lower under this alternative than for the proposed project.

This alternative would divert person trips from the auto and taxi modes to the public transit mode on a typical weekday and holiday weekday, thereby reducing the traffic impacts at the intersections of Fourth Street/Market Street, Fifth Street/Market Street, Fourth Street/Mission Street, Fifth Street/Mission Street, and Stockton Street/O'Farrell Street. This alternative would result in 11 instances of significant and unavoidable level of service deterioration at four of the six local study intersections, compared to 16 instances which would occur under the proposed project.

The reduction in vehicle trips would result in a corresponding reduction in persons walking from the off-street parking facilities in the study area to the proposed project site. Therefore, the projected person trip diversions would reduce the pedestrian impacts on the southwest and northwest corners of the Fourth Street/Mission Street intersection, the southwest corner of the Fifth Street/Mission Street intersection, the southwest and northwest corners of the Stockton Street/O'Farrell Street intersection, and on the west side of Fourth Street between Market and Mission Streets.

This alternative would, however, increase public transit ridership over the projected levels discussed in Chapter IV.D. Transportation. The MUNI routes and East Bay-bound BART lines, projected to operate at LOS D or worse, would experience additional overcrowding.

ALTERNATIVE E: ALTERNATE USE PROJECT

This alternative would be a project with approximately the same total square footage as the proposed project, but with an alternate mix of uses including theaters. This alternative would contain about 469,000 sq. ft. of retail space, 81,000 sq. ft. of office space, 42,000 sq. ft. of movie theater space (7-10 screens), and the same amount of open space, and parking/loading/mechanical space as the proposed project. The movie theaters would be located on the uppermost floor of Pacific III, with internal access; hours of operation would be between approximately 11:00 a.m. and 10:30 p.m., seven days per week.

This alternative would have the same environmental effects as the proposed project (described in Chapter IV. Environmental Impacts, pages 69 to 134), except for those related to Transportation, Air Quality and Employment.

This alternative would generate more overall vehicle trips than the proposed project. There would be approximately 1,432 typical weekday P.M. peak hour (5:00-6:00 p.m.) trips, 1,791 typical weekend midday peak hour (12:00-1:00 p.m.) trips, 1,757 holiday (Thanksgiving to Christmas) weekday P.M. peak hour trips, and 2,930 holiday weekend midday peak hour trips. Consequently, traffic and air quality effects on local intersections and anticipated parking demand would be correspondingly greater under this alternative than for the proposed project.

This alternative would accommodate about 1,750-1,800 workers on the site (up to 50 less than the project), consisting of about 1,340 retail workers (10 less than the project), 300 office workers (100 less than the project), about 70-110 theater workers and about 50 parking, security and maintenance workers (the same as the proposed project).[1]

ALTERNATIVE F: PEDESTRIAN BRIDGE

This alternative would have the same types and amounts of uses as the proposed project, but would include a pedestrian bridge over Jessie Street and Mission Street, connecting the Pacific Center to the Fifth and Mission Parking Garage. The pedestrian bridge would be enclosed, clad in light-colored exterior materials with large windows on east and west sides. The bridge would occur at the seventh level, approximately 60 feet above the ground. The bridge would be accessible from the Fifth and Mission Parking Garage, the Pacific III portion of the project, and from the north Mission Street sidewalk, via an elevator.

This alternative would have the same environmental effects as the proposed project (described in Chapter IV. Environmental Impacts, pages 69 to 134), except for those related to Transportation, Urban Design and Visual Quality and Shadows.

By including a direct pedestrian connection to the Fifth and Mission Parking Garage, this alternative would alter the project-generated pedestrian travel patterns by diverting some pedestrians from the surrounding sidewalks, crosswalk and corners. This alternative would divert approximately 33 percent of the project-generated pedestrians parking in the Fifth and Mission Parking Garage off of the street level elements. The projected diversions would reduce the impacts on the southwest and northwest corners of the Fourth Street/Mission Street intersection, the southeast corner of the Fifth Street/Mission Street intersection, and on the west side of Fourth Street between Market and Mission Streets.

This alternative would generate the same number of overall vehicle trips as the proposed project. There would be approximately 905 typical weekday P.M. peak hour (5:00-6:00 p.m.) trips, 1,790 typical weekend midday peak hour (12:00-1:00 p.m.) trips, 1,230 holiday (Thanksgiving to Christmas) weekday P.M. peak hour trips, and 2,885 holiday weekend midday peak hour trips. Consequently, traffic and air quality effects on local intersections under this alternative would be similar to the proposed project.

The pedestrian bridge would cross Jessie Street and Mission Street, resulting in some blocked views from the east and west looking down these streets. This effect would be greatest along Mission Street. The terminus of the current view looking west on Mission Street is of Twin Peaks; the terminus of the current view looking east on Mission Street is of the San Francisco Bay, and portions of Treasure Island. The pedestrian bridge would not obstruct these views from mid- and long-ranges vantages, but from near-range vantages the pedestrian bridge would be clearly visible, blocking some views up and down Mission Street. This visual effect of the pedestrian bridge would be less pronounced on Jessie Street, due to the short length (one block) of the street at this location, and the two Emporium Store bridges which currently cross that street.

The pedestrian bridge would shade portions of Mission and Jessie Street (and their adjacent sidewalks) throughout the year. These shadows would be greatest in the afternoons during the winter months, when the sun is at its lowest point.

ALTERNATIVE G: NO ON-SITE PATRON/EMPLOYEE PARKING

Under Alternative G, on-site vehicle parking for patrons and employees would not be provided. In place of the accessory parking provided under the proposed project, this alternative would include additional retail space in the existing basement levels. To meet FAR requirements, there would be less office space than under the proposed project, one less floor level in the Pacific III building, and 3-5 movie theaters located on the uppermost level of Pacific III. This alternative would contain the following uses: approximately 482,500 sq. ft. of retail space (5,500 sq. ft. more than the project); 82,000 sq. ft. of office space (26,000 less than the project); 19,000 sq. ft. of open space (the same as the project); 21,300 sq. ft. of movie theater space (21,300 sq. ft. more than the project); and 74,200 sq. ft. of mechanical/maintenance/loading space compared to about 98,000 sq. ft. of mechanical/maintenance/parking/loading space under the proposed project. Alternative G would consequently contain about 679,000 gross square feet of space, compared to 702,000 sq. ft. for the proposed project, a difference of 23,000 sq. ft.

As with the proposed project, the Pacific Building facades would undergo seismic reinforcement and architectural restoration. The Pacific Building interior and the 22 Fourth Street building interior would be demolished, replaced with an integrated floor plate design.

The building envelope of this alternative would be the same as with the proposed project, with one exception: the Pacific III portion of the project would be nine stories in height, one story shorter than under the proposed project. Therefore, the following effects would be the same or slightly less than the proposed project: visibility of this alternative in near-, mid- and long-range views; wind speeds on sidewalks adjacent to the site; additional shadows on streets and sidewalks; and the relationship of the alternative to the existing urban context. Architectural restoration of the Pacific Building facades and seismic reinforcement of the entire Pacific I structure would be the same as under the proposed project. Construction noise and construction air quality impacts for this alternative would be the same as with the proposed project, as the construction duration would be about the same.

The overall FAR of this alternative would be 9:1 (the same as the project), which would be achieved by the use of approximately 80,000 sq. ft. of transferable development rights (TDR), obtained from as-yet unidentified lots in the C-3 district.

This alternative would generate a slightly greater number of overall vehicle trips than the proposed project, despite the reduction in gross square footage; this would result from the increase in retail space and the inclusion of theater space. There would be approximately 990 typical weekday P.M. peak hour (5:00-6:00 p.m.) trips (about 85 more than the project), 1,810 typical weekend midday peak hour (12:00-1:00 p.m.) trips (20 more than the project),1,310 holiday (Thanksgiving to Christmas) weekday P.M. peak hour trips (80 more than the project), and 2,900 holiday weekend midday peak hour trips (15 more than the project). Consequently, traffic and air quality effects on local intersections and anticipated parking demand would be correspondingly greater under this alternative than the proposed project.

This alternative, by not including on-site parking and by increasing overall vehicle trips, would also have greater effects on on-street and off-street parking facilities in the project area.

This alternative would accommodate about 1,745-1,765 workers on the site (up to 55 less than the project), consisting of about 1,380 retail workers (30 more than the project), 300 office workers (100 less than the project), about 30 security and maintenance workers (20 less than the project) and about 35-55 theater workers.

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[1] The employment density factor for movie theaters is approximately 11.25 employees per screen (Vicky Ek, United Artists District Office, telephone conversation, April 15, 1992). This employment density factor is also used in the analysis of Alternative G; Alternative G would include 3-5 movie theaters.

II. PROJECT DESCRIPTION

A. PROJECT SPONSOR'S OBJECTIVES

Ahmanson Commercial Development Company (hereinafter referred to as the project sponsor) proposes to develop an approximately 702,000 square feet (sq. ft.) vertical retail and office complex through new construction and rehabilitation of existing buildings. The project sponsor's objectives are to develop a large urban mixed-use project containing "high-end" retail businesses and support office space in close proximity to Union Square, and to rehabilitate and restore an historically significant Downtown building for contemporary use.

B. PROJECT LOCATION

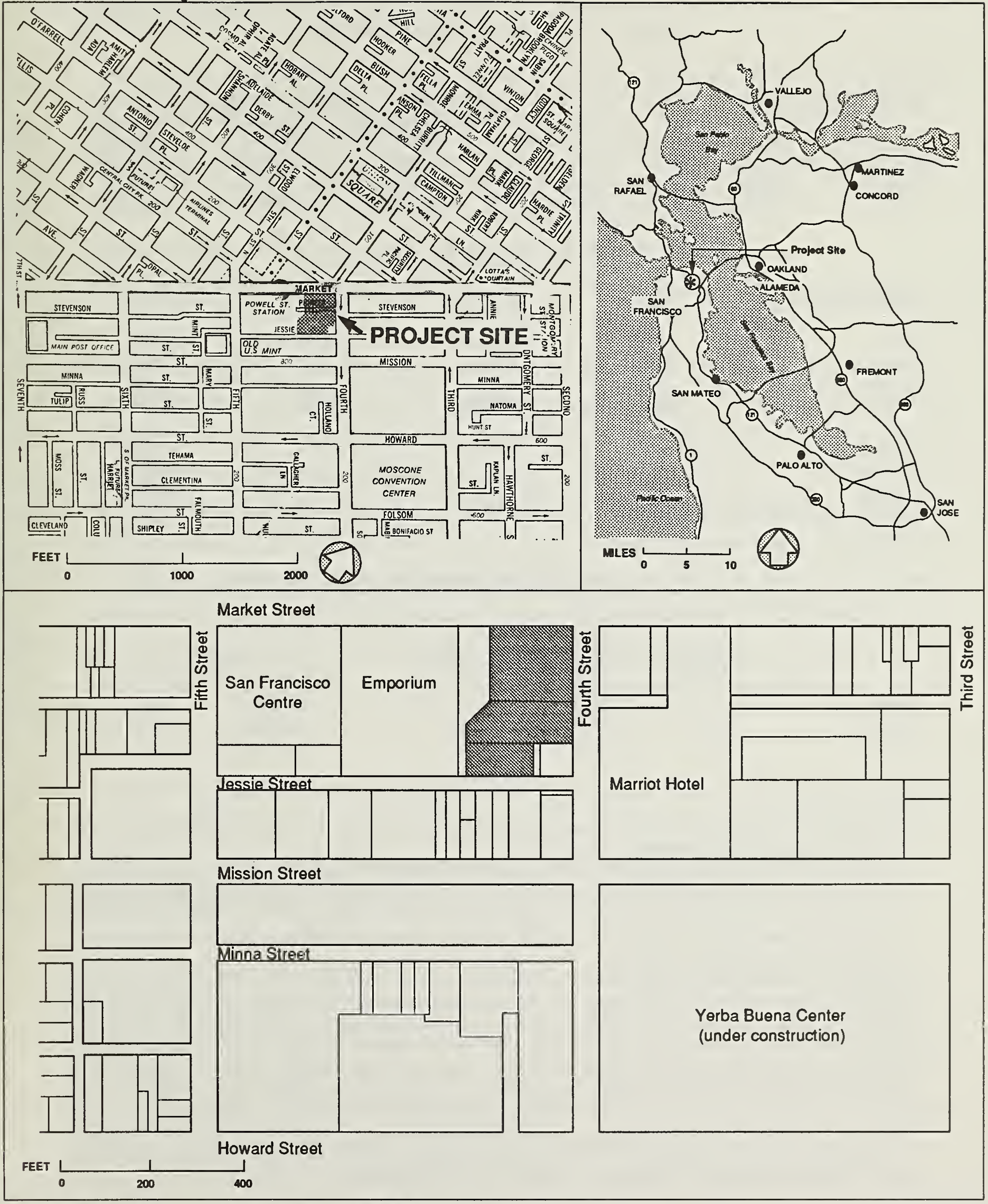
The proposed project would be located at 801 Market Street, at the southwest corner of the intersection of Fourth and Market Streets. The 67,765 sq. ft. project site is located on Lots 1, 46 and 47 of Assessor's Block 3705. The project site is bounded by Market Street, Fourth Street, the Victorian Hotel (at the northwest corner of Jessie and Fourth Streets), Jessie Street, and the 308 Jessie Street and 833 Market Street buildings (see Figure 1, page 23). The project site contains the nine-story, 254,000 sq. ft. Pacific Building at the southwest corner of Fourth and Market Streets (referred to as Pacific I), the 10-16-story, 275,000 sq. ft. 22 Fourth Street building on Fourth Street between Market and Jessie Streets (referred to as Pacific II), and a surface loading dock/parking area on Jessie Street (referred to as the Pacific III site). Beneath the Pacific II and III portions of this site is a two-level basement garage which presently accommodates 175 cars.

C. PROJECT CHARACTERISTICS

Project characteristics are summarized in Table 1, page 24. The project would include the following components: architectural rehabilitation and seismic reinforcement of the Pacific Building facades along Market and Fourth Streets; demolition of the interiors of the Pacific Building and 22 Fourth Street building; reconstruction of Pacific I and II interiors including alignment of floorplates; construction of a ten-story Pacific III building connected internally to Pacific II; and modification of the existing two-level basement parking garage and loading area. The project would integrate the

Pacific Center
Site Location Map

Figure 1



SOURCE: EIP ASSOCIATES

89311

▨ Project Site
Assessor's Block 3705
Lots 1, 46 and 47

TABLE 1: PROJECT CHARACTERISTICS

SIZE OF SITE (sq. ft.)	
Pacific I:	28,275
Pacific II:	24,488
Pacific III:	15,000
TOTAL	67,763

EXISTING FLOOR AREA (sq. ft.)	Apparel/Office	Retail	Total
Pacific I:	226,000	28,000	254,000
Pacific II:	251,000	24,000	275,000
Pacific III:	N/A	N/A	N/A
TOTAL	477,000	52,000	529,000

	GROSS FLOOR AREA (sq. ft.)[1]			
PROPOSED USES	Pacific I	Pacific II	Pacific III	TOTAL PROJECT AREA (sq. ft.)
Office	---	84,000	24,000	108,000
Retail	179,000	186,000	112,000	477,000
Mechanical[2]	24,000	---	---	24,000
Subtotal	204,000	270,000	136,000	610,000
Open Space[3]				19,000
Parking[4]				39,000
Loading[5]				25,000
Mechanical/Maintenance[2]				9,000
TOTAL				702,000

HEIGHT MEASUREMENTS (ft.) AND FAR

	HEIGHT		
	Existing	Proposed	Allowable
Pacific I:	110	no change	120
Pacific II:	220	no change	160
Pacific III:	N/A	150	160

FAR[6]	
Existing:	7.8:1
Allowable:	6:1/9:1[6]
Proposed:	9:1

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[1] Gross floor area is the area of the building applicable to Floor Area Ratio (FAR) calculations; numbers may not add up exactly due to rounding.

[2] Section 102.9(1) of the *City Planning Code* requires that basement, storage and other spaces not necessary to the operation or maintenance of the building itself be included in the FAR calculations. Mechanical and maintenance space of about 24,000 sq. ft. would be supportive of retail activities and therefore applicable to the FAR; about 9,000 sq. ft. of mechanical and maintenance space would be necessary for operation and maintenance of the building itself.

[3] Section 138, Open Space Requirements in C-3 Districts, requires open space be provided in the C-3-R use district at a ratio of 1:100 to gross floor area, for new building or addition of gross floor area equal to 20 percent or more of an existing building, except for residential, institutional or predominantly retail uses; a predominantly retail building is one in which two-thirds or more of occupied floor area is retail. The proposed project would be an addition of gross floor area of approximately 13 percent and would be predominantly retail (about 78 percent); the project would therefore be exempt from Section 138. The project would, however, provide about 11,035 sq. ft. of Courtyard, Rotunda and Arcade open space, and 7,585 sq. ft. of Roof Terrace open space, for a total of 18,615 sq. ft. of open space. If the project were not exempt from open space requirements of Section 138, the project would be required to provide about 800 sq. ft. of open space for the 80,000 sq. ft. of additional gross floor area.

Table 1 (Continued)

[4] Under Section 204.5, accessory parking of up to seven percent of the total gross floor area would be permitted; the project would provide approximately four percent of total gross floor area as accessory parking, accommodating 130 vehicles under tandem-valet operation on two basement levels.

[5] The project would provide 10 truck loading spaces and 20 service van loading spaces.

[6] The basic Floor Area Ratio (FAR) limit for the site is 6:1. Section 128 of the *City Planning Code* provides for the transfer of development rights (TDR) for the project site allowing FAR to be increased up to a maximum of 9:1. The project proposes to use approximately 80,000 sq. ft. of TDR.

Source: San Francisco *City Planning Code*; EIP Associates; Whisler-Patri Architects

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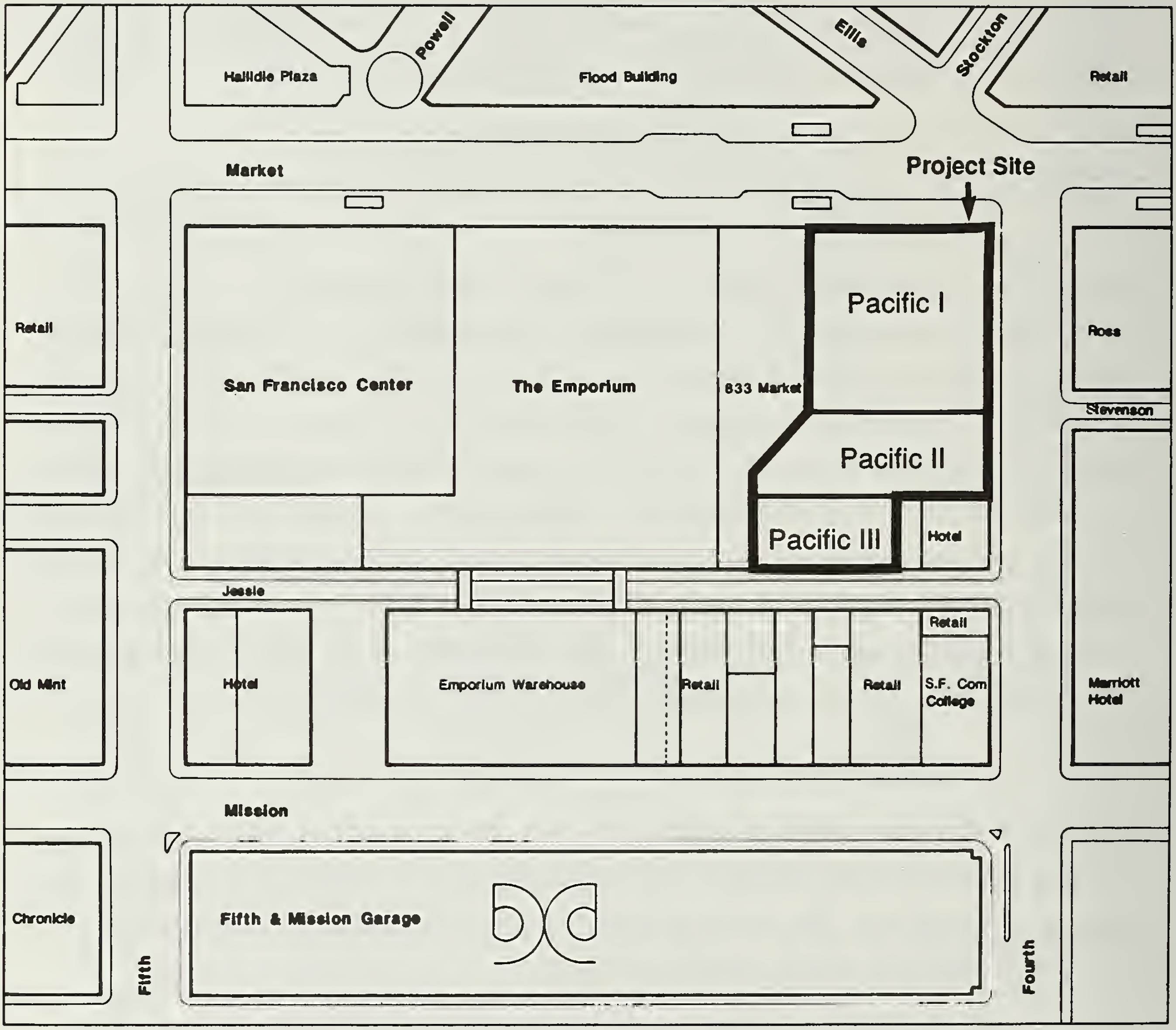
Pacific I, II and III portions of the site into a single structure that would be a retail and office complex, organized around a seven-story skylighted courtyard in Pacific I. A site plan, floor plans and elevations are shown in Figures 2 through 9, pages 26 to 33. Additionally, Figure 25, at page 147 below, provides an axonometric projection of Alternative B, which would have the same building envelope as the proposed project. The project would contain a total of about 477,000 sq. ft. of retail space, about 108,000 sq. ft. of office space, about 19,000 sq. ft. of public open space (in the form of an interior courtyard, rotunda and arcade, and rooftop terraces), and about 98,000 sq. ft. of parking, loading and mechanical space, for a total development of about 702,000 sq. ft. The overall FAR of the proposed project would be 9.0:1, which would be achieved by the use of approximately 80,000 sq. ft. of Transferrable Development Rights (TDR), obtained from as yet unidentified lots in the C-3 district.

The Pacific Building is a nine-story, reinforced-concrete structure which contains a total of about 254,000 sq. ft. of usable space; at present only the ground floor of the building is occupied by about 28,000 sq. ft. of retail uses. The amount of usable space would be reduced from about 254,000 sq. ft. to about 204,000 sq. ft., a reduction of 50,000 sq. ft.

The Pacific Building was built in 1907 and is designated as a Category I (Significant) Building in the *Downtown Plan*, rated "A" by the Foundation for San Francisco's Architectural Heritage, and rated "4" in the 1976 Department of City Planning citywide inventory of architecturally significant buildings (the architectural significance of this building is discussed in detail in Chapter III.B, Architectural and Historic Resources). The Market Street and Fourth Street facades of this building would undergo architectural restoration and seismic reinforcement. The interior structure of the building would be demolished; the replacement structure would be unified with the reconstructed interior of the adja-

Pacific Center
Site Plan

Figure 2



SOURCE: WHISLER-PATRI ARCHITECTS

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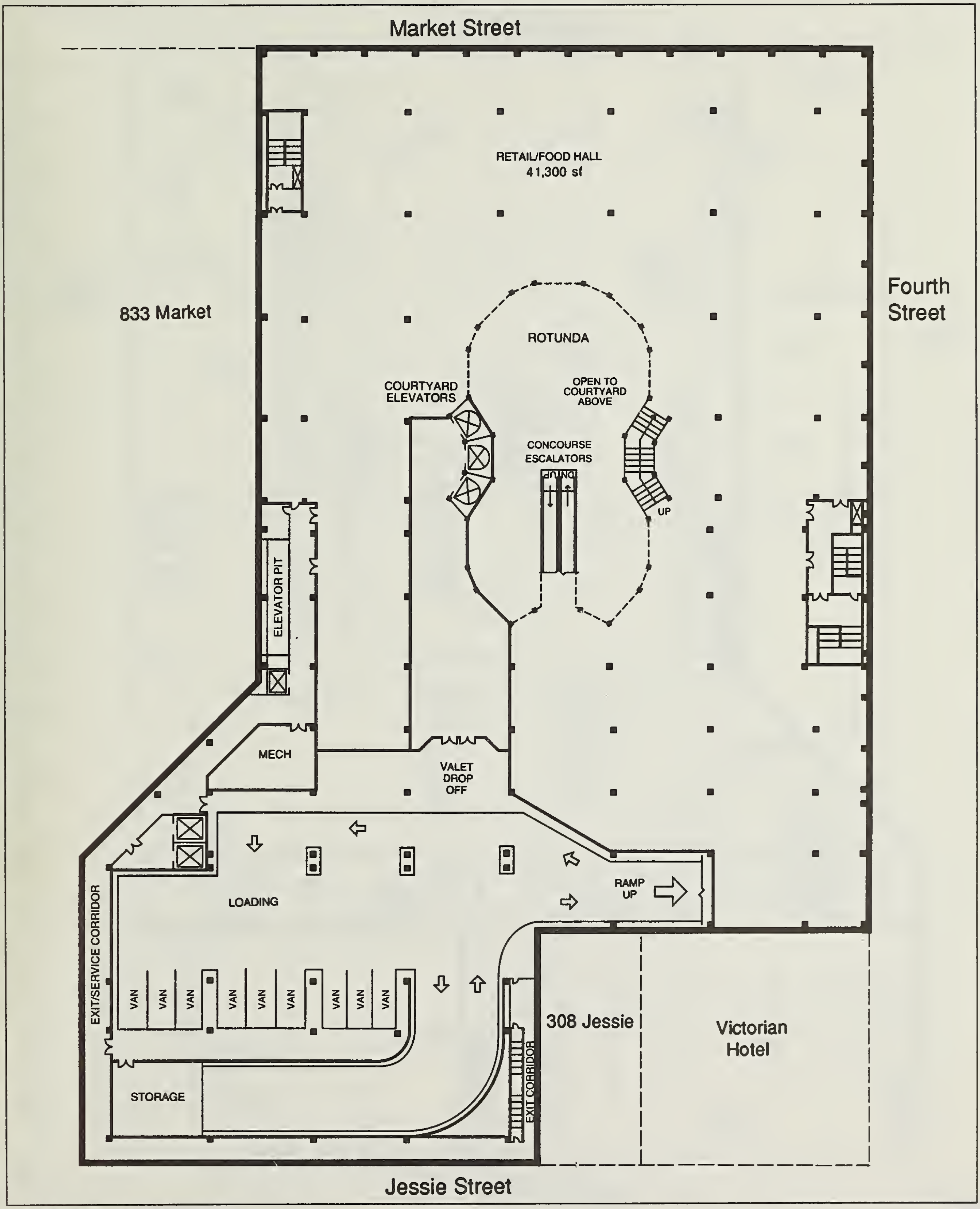
Pacific Center
Concourse Level Floor Plan

Figure 3



SOURCE: WHISLER-PATRI ARCHITECTS

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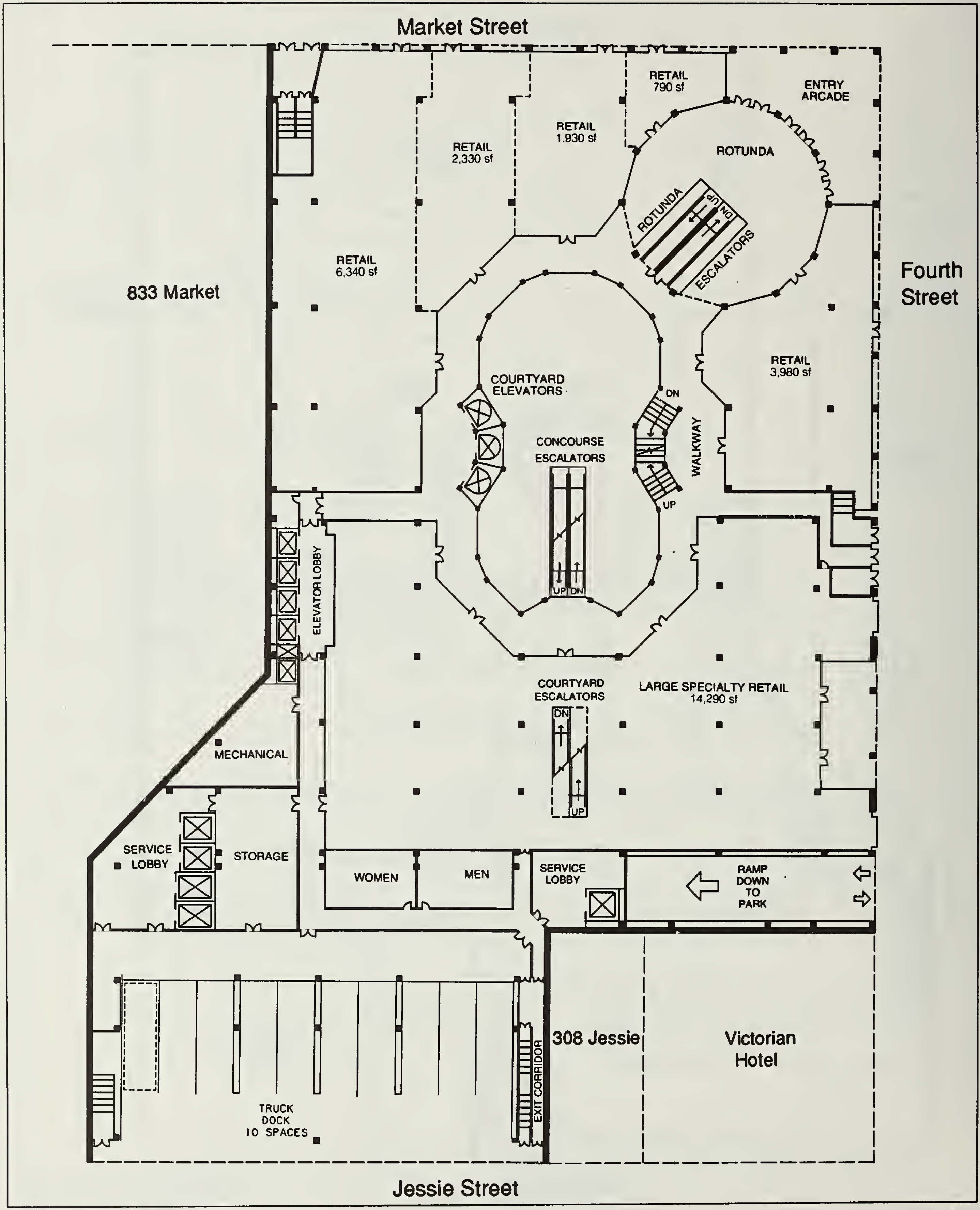
Pacific Center
Street Level Floor Plan

Figure 4



SOURCE: WHISLER-PATRI ARCHITECTS

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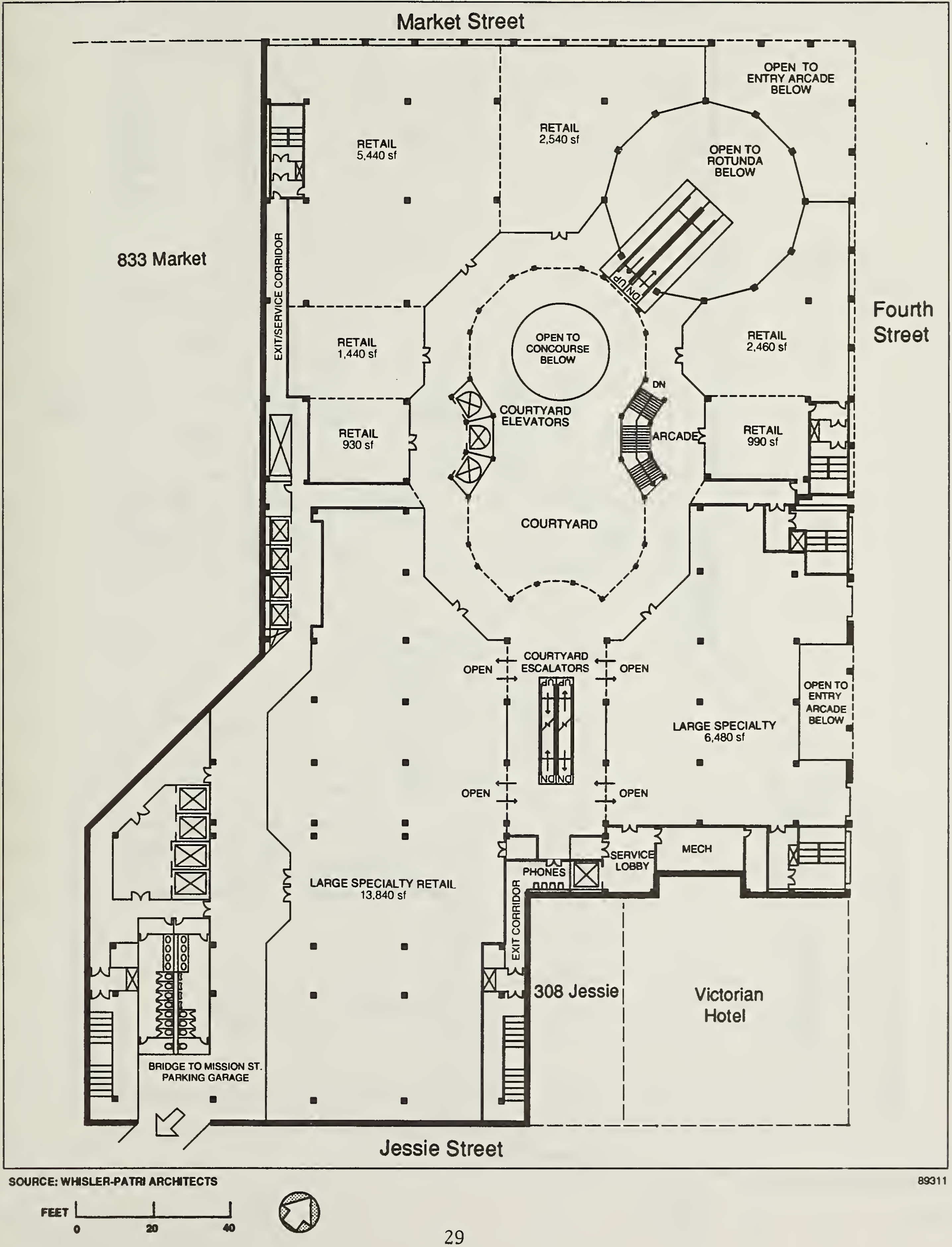
Pacific Center
Courtyard Level 1 Floor Plan

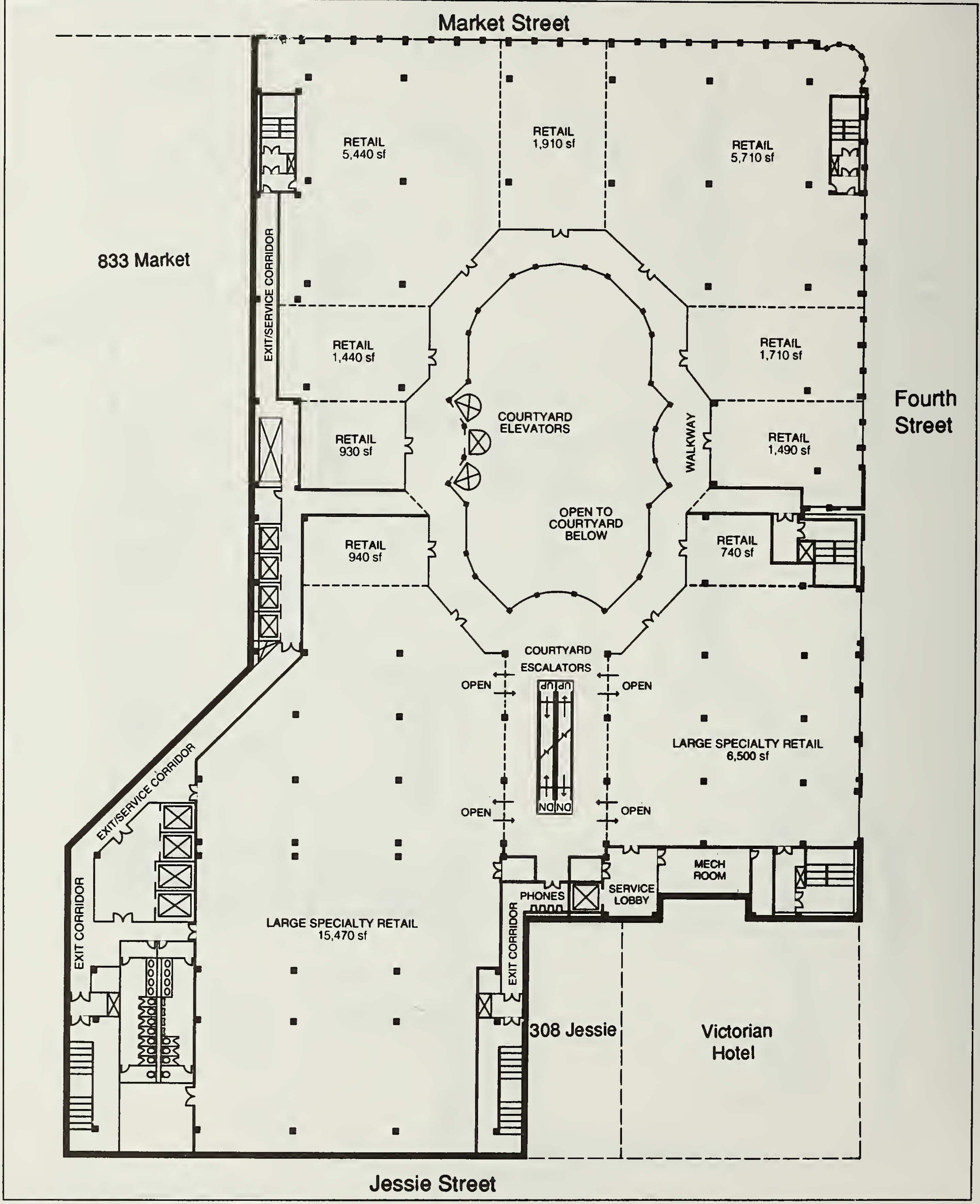
Figure 5



SOURCE: WHISLER-PATRI ARCHITECTS

Pacific Center
Courtyard Levels 2-6 Floor Plan

Figure 6

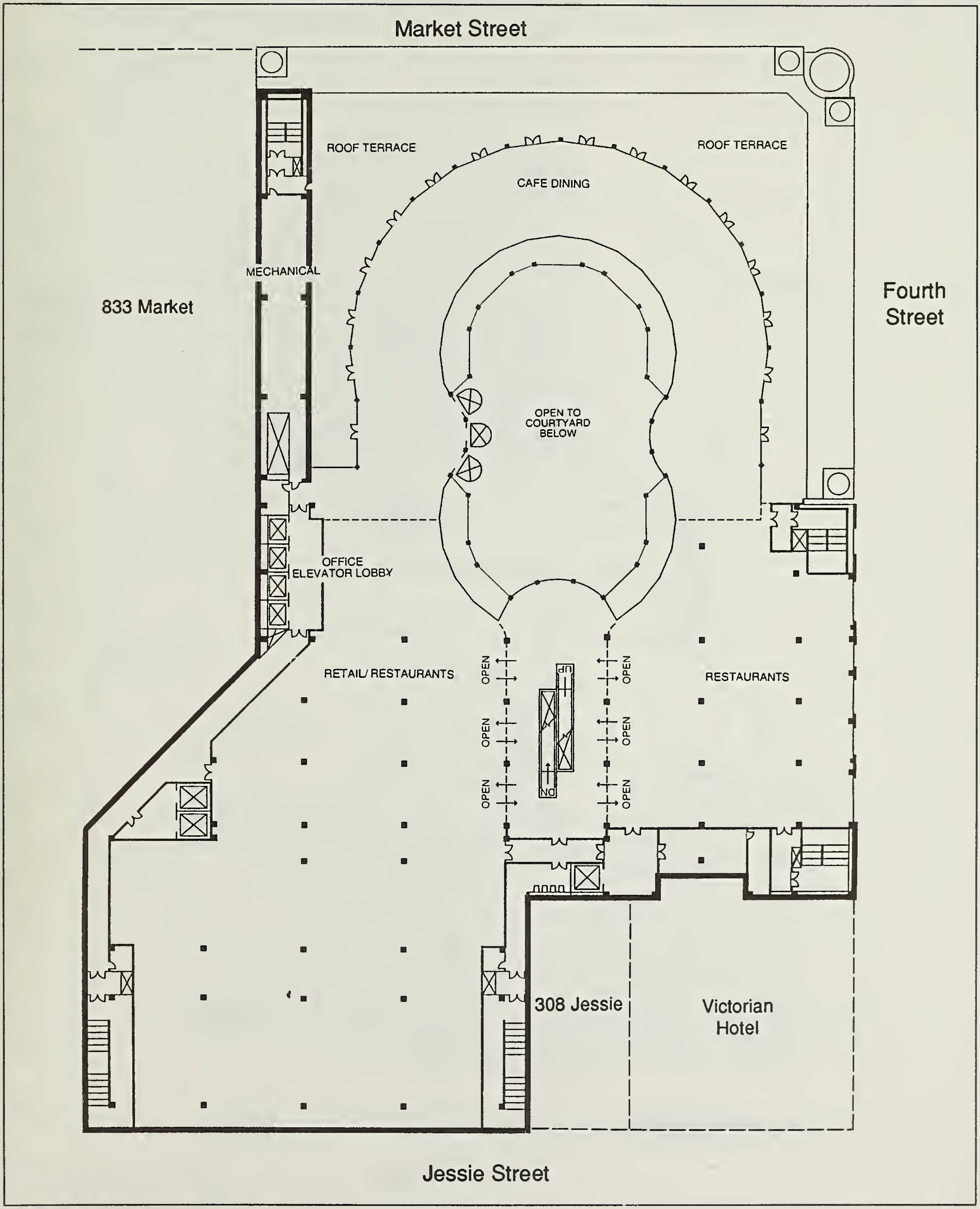


SOURCE: WHISLER-PATRI ARCHITECTS

89311

Pacific Center
Terrace Level Floor Plan

Figure 7



SOURCE: WHISLER-PATRI ARCHITECTS

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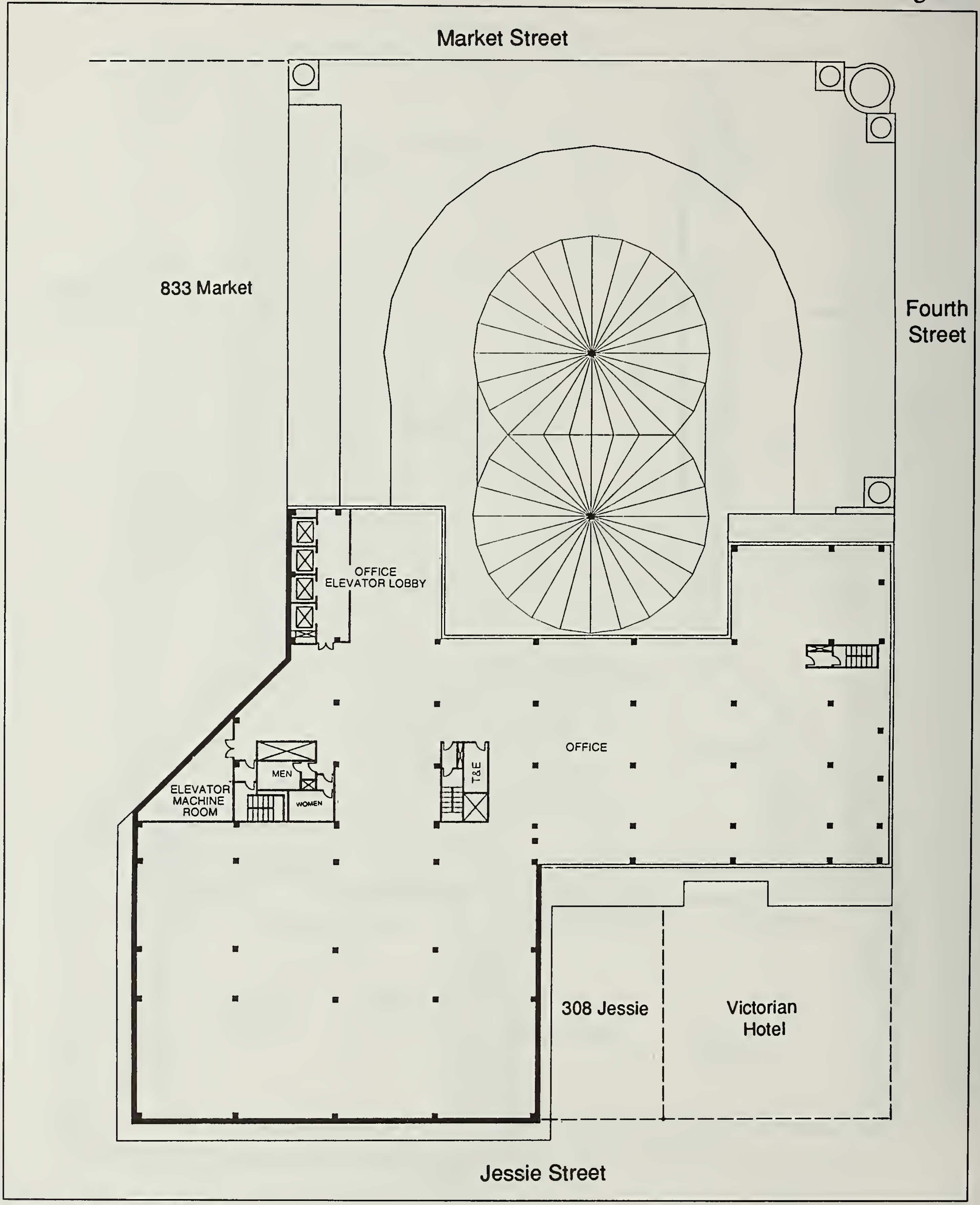
Pacific Center
Office Level 8 Floor Plan

Figure 8



SOURCE: WHISLER-PATRI ARCHITECTS

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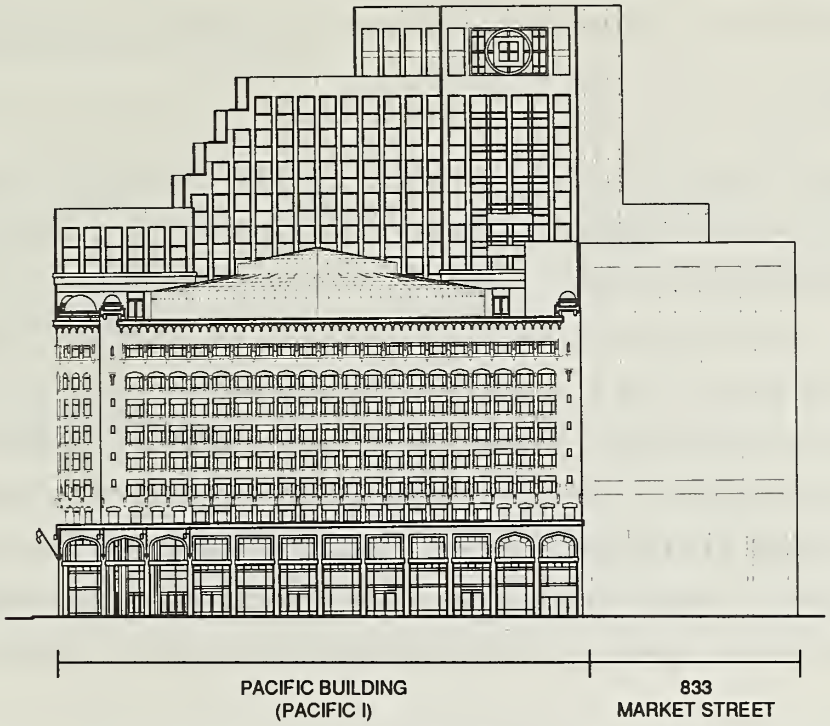
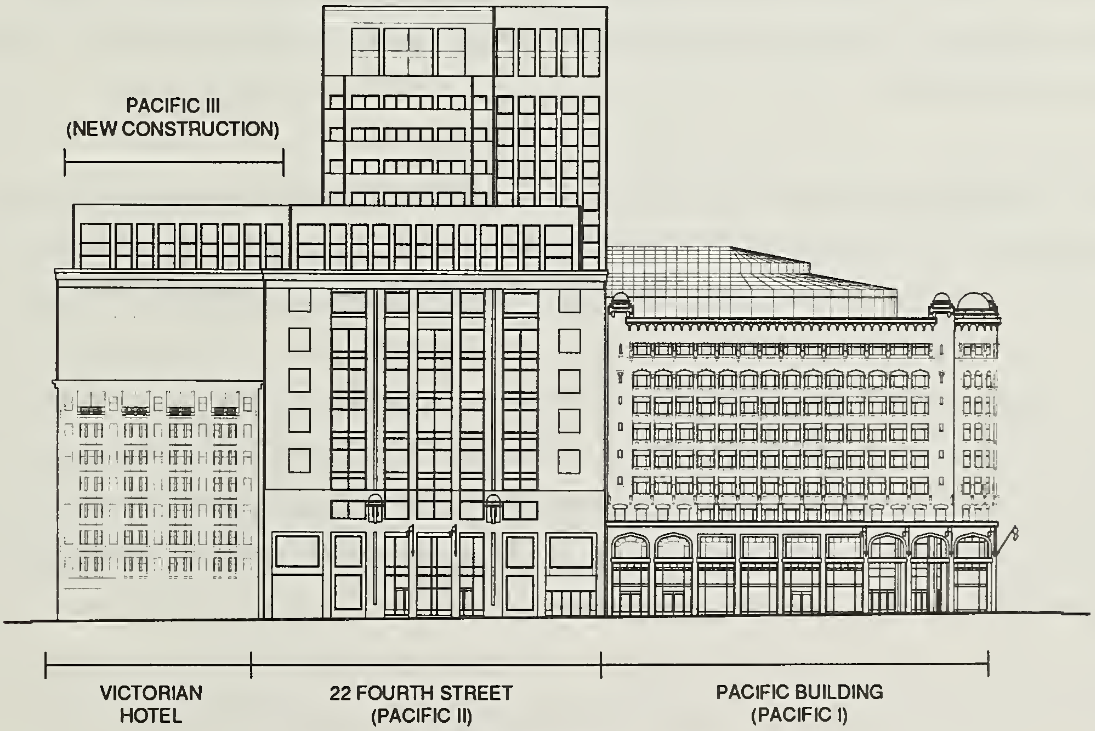
Pacific Center
Market Street and Fourth Street Elevations

Figure 9



MARKET STREET



FOURTH STREET

SOURCE: WHISLER - PATRI

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cent Pacific II building. The proposed project could be connected in the future to the adjacent 833 Market Street building, at the basement, first and second floors. In a similar fashion, 833 Market Street could be connected to the adjacent Emporium Store, thus providing a continuous internal link from the Pacific Center to the San Francisco Centre.

The Pacific II building, constructed in 1981, is a 10-16-story building containing approximately 275,000 sq. ft. of office and apparel mart space above a two-level subterranean garage containing 198 parking spaces. This building would be extensively remodelled, including the demolition and replacement of the interior structure, and removal and replacement of the facades on the lower ten floors. The new floorplates would be continuous with those of reconstructed Pacific I and newly constructed Pacific III. The existing basement garage would be converted to a accommodate tandem-valet operation for 130 cars, and loading docks for 20 service vans (the van loading portion of the garage would be located under the Pacific III portion of the site). The parking garage/van loading area would continue to be accessed via Fourth Street just north of the Victorian Hotel. The amount of usable space in Pacific II would be reduced to about 270,000 sq. ft., a reduction of 5,000 sq. ft.

The Pacific III site currently contains a surface-level parking and loading dock for ten trucks. A ten-story structure would be built above the existing loading area, which would contain about 136,000 sq. ft. of usable space. The ten truck loading docks for the proposed project would remain at street level. Loading dock access would be from the present location on Jessie Street, just east of the 803 Jessie Street building.

Irregular street intersections along lower and middle Market Street reflect the merger of two offset street grids patterns. For the intersection adjacent to the project site, the Stockton Street and Ellis Street legs of the intersection on the north side of Market Street are offset (to the west) from the Fourth Street leg of the intersection on the south of Market Street. The eastern Market Street crosswalk reflects this diagonal orientation, while the western Market Street crosswalk does not; the western crosswalk was diagonally-oriented until the mid-1970s when its current perpendicular orientation was stripped. As part of the proposed project, the project sponsor is seeking to reorient the western Market Street crosswalk from its current alignment (perpendicular to Market Street) to an alignment parallel to the eastern crosswalk.

D. PROJECT SCHEDULE, COST AND APPROVAL REQUIREMENTS, AND MASTER PLAN POLICIES

PROJECT SCHEDULE AND COST

The project sponsor expects the environmental review, project review and preliminary design to be completed in April, 1993. If the project were approved and building permits issued, construction would take about 24 to 28 months with interior finishing thereafter. Initial occupancy is anticipated in 1995. Estimated construction cost of the project would be about $60,000,000.00 (1991 dollars), including excavation and building shell.

APPROVAL REQUIREMENTS

Following the public hearing before the City Planning Commission on the Draft EIR, responses to written and oral comments will be prepared. The EIR will be revised as appropriate and presented to the City Planning Commission for certification as to accuracy, objectivity and completeness. No permits may be issued before the Final EIR is certified.

The project would require approval under Section 309 of the *City Planning Code*, Permit Review in C-3 Districts, which governs the review of project authorization and building and site permit applications in C-3 districts. Under Section 309, the City Planning Commission would evaluate the project's provision of open space (*City Planning Code* Section 138) and art work (*City Planning Code* Section 149). The City Planning Commission would hold a public hearing to consider the project application, and would adopt a motion approving, approving with conditions, or disapproving the project. If the project were to be approved by the City Planning Commission, the project sponsor must obtain building and related permits from the Central Permit Bureau of the Department of Public Works. An application for a Site Permit has not been filed to date.

As part of approving and implementing the *Downtown Plan* and implementation ordinances, the Board of Supervisors also established a limit on the amount of new office space that could be approved in San Francisco (*City Planning Code* Sections 320-324), which was further modified following voter approval of San Francisco's Proposition M in 1986. The "annual limit" in effect establishes a policy that some regional office demand be accommodated in San Francisco but that some also be accommodated elsewhere in the region on sites outside San Francisco. The proposed project would not be subject to the requirements of *City Planning Code* Sections 320-324 because there would be an overall reduction in existing office space on the site, from about 477,000 sq. ft. to 108,000 sq. ft., a reduction of 369,000 sq. ft.

On November 14, 1986, the voters of San Francisco passed Proposition M, the Accountable Planning Initiative. The measure established eight Priority Policies. These policies are: preservation and enhancement of neighborhood-serving retail uses; protection of neighborhood character; preservation and enhancement of affordable housing; discouragement of commuter automobiles; protection of industrial and service land uses from commercial office development and enhancement of resident employment and business ownership; earthquake preparedness; landmark and historic building preservation; and protection of open space. Prior to issuing a permit for any project that requires an Initial Study under CEQA or adopting any zoning ordinance or development agreement, the City is required to find that the proposed project or legislation is consistent with the Priority Policies. The City Planning Commission, in its decision regarding the proposed project approval or disapproval, would make a determination of the project's conformance with the Priority Policies.

Section 1111.6 sets forth standards for the alteration of buildings designated as significant or contributory in Article 11 of the *City Planning Code*. Proposed alterations to the Category I (Significant) Pacific Building, which is located within the Kearny-Market-Mason-Sutter Conservation District, would be reviewed pursuant to those standards. Review includes referral to the Landmarks Preservation Advisory Board (LPAB) for a recommendation to the City Planning Commission, which may approve, disapprove, or approve with conditions the alteration application. For significant or contributory buildings, Section 1111.6 states in part that the distinguishing original qualities or character of the building may not be damaged or destroyed and that any distinctive architectural feature which affects the overall appearance of the building shall not be removed or altered unless it is the only feasible means to protect the public safety.

The original Pacific Apparel Mart project, which was approved at this site by the City Planning Commission (CPC) in 1981 (see page 1, above) included a condition requiring that the sponsor for that project either provide for a basement-level direct connection to the Powell Street BART/MUNI transit station or contribute an in-lieu fee of at least $750,000 to the City to be used for unspecified transportation improvement projects (CPC Resolution No. 8890, adopted March 26, 1981). That condition of approval was included in that earlier project due to the fact that the project included development bonuses regarding floor area. The project currently proposed has a Floor Area Ratio of 9.0:1, which is permitted in the C-3-R District with use of Transferable Development Rights. Since no floor area bonus is required for the project, the above-referenced condition placed upon the original project is no longer applicable. Hence, that previous condition of approval is not automatically required for the present project. Nevertheless, in its review of the proposed project, the City Planning Commission may consider requiring similar or other conditions of approval, as appropriate.

MASTER PLAN POLICIES

The *San Francisco Master Plan* contains objectives and policies which would apply to the proposed project. The following objectives and policies of the Commerce and Industry and Urban Design Elements of the City's *Master Plan*, and the *Downtown Plan*, a part of the *Master Plan*, apply to the project.

Objective 2 of the Commerce and Industry Element, "maintain and enhance a sound and diverse economic base and fiscal structure for the city" and Policy 1 of Objective 2, "seek to retain existing commercial and industrial activity and to attract new such activity to the city," would apply to the project, because the project would provide about 1,800 full- and part-time jobs as well as provide space for commercial activities. The project would address Policy 1 of Objective 3 which states "promote the attraction, retention and expansion of commercial and industrial firms which provide employment improvement opportunities for unskilled and semi-skilled workers." The proposed retail and building maintenance uses would provide entry level employment opportunities for unskilled and semi-skilled workers.

Objective 2 of the Urban Design Element, "conservation of resources which provide a sense of nature, continuity with the past, and freedom from overcrowding" and Policy 4 of Objective 2, "preserve notable landmarks and areas of historic, architectural or aesthetic value, and promote the preservation of other buildings and features that provide continuity with past development," would apply to the project due to the historic and architecturally significant Pacific Building located on the project site. The project would rehabilitate the historic features of the 1907 Pacific Building, following the standards set forth in *City Planning Code* Article 11, Section 1111.6, and in consultation with the Landmarks Preservation Advisory Board and the project's architectural consultant.

The project would address Objective 3 of the *Downtown Plan,* "improve downtown San Francisco's position as the region's prime location for specialized retail," and Policy 5 of Objective 3, "meet the convenience needs of daytime downtown workers." The project would provide up to 100 specialized retail stores at a key transit node within the retail core.

Other objectives and policies include Objective 1, Policy 6 of the *Transportation Element*, to "develop a financing system for transportation in which funds may be allocated without unnecessary restriction for priority improvements according to established policies," and Objective 1, Policy 7 of the *Transportation Element* of the *San Francisco Master Plan*, to "seek means to reduce peak travel demand." Policy 3 of Objective 18 in the *Downtown Plan*, which discourages provision of new long-term commuter parking spaces in and around downtown, and states that replacement of long-term parking spaces lost in the downtown area should occur in areas peripheral to the downtown commercial district. Policy 2 of Objective 20 of the *Downtown Plan*, which seeks to organize and control traffic circulation in the downtown core by channeling vehicles into peripheral parking facilities; and Policy 7 of Objective 20 of the *Downtown Plan* which encourages conversion of existing parking facilities to short-term use, rate structures which favor short-term parking, and states that additional short-term parking facilities should be located in the designated parking belt outside the downtown core.

III. ENVIRONMENTAL SETTING

A. LAND USE AND ZONING

The Initial Study concluded that the project would not have significant adverse land use or zoning impacts. Land use and zoning are included in the EIR for informational purposes, to orient the reader.

LAND USE

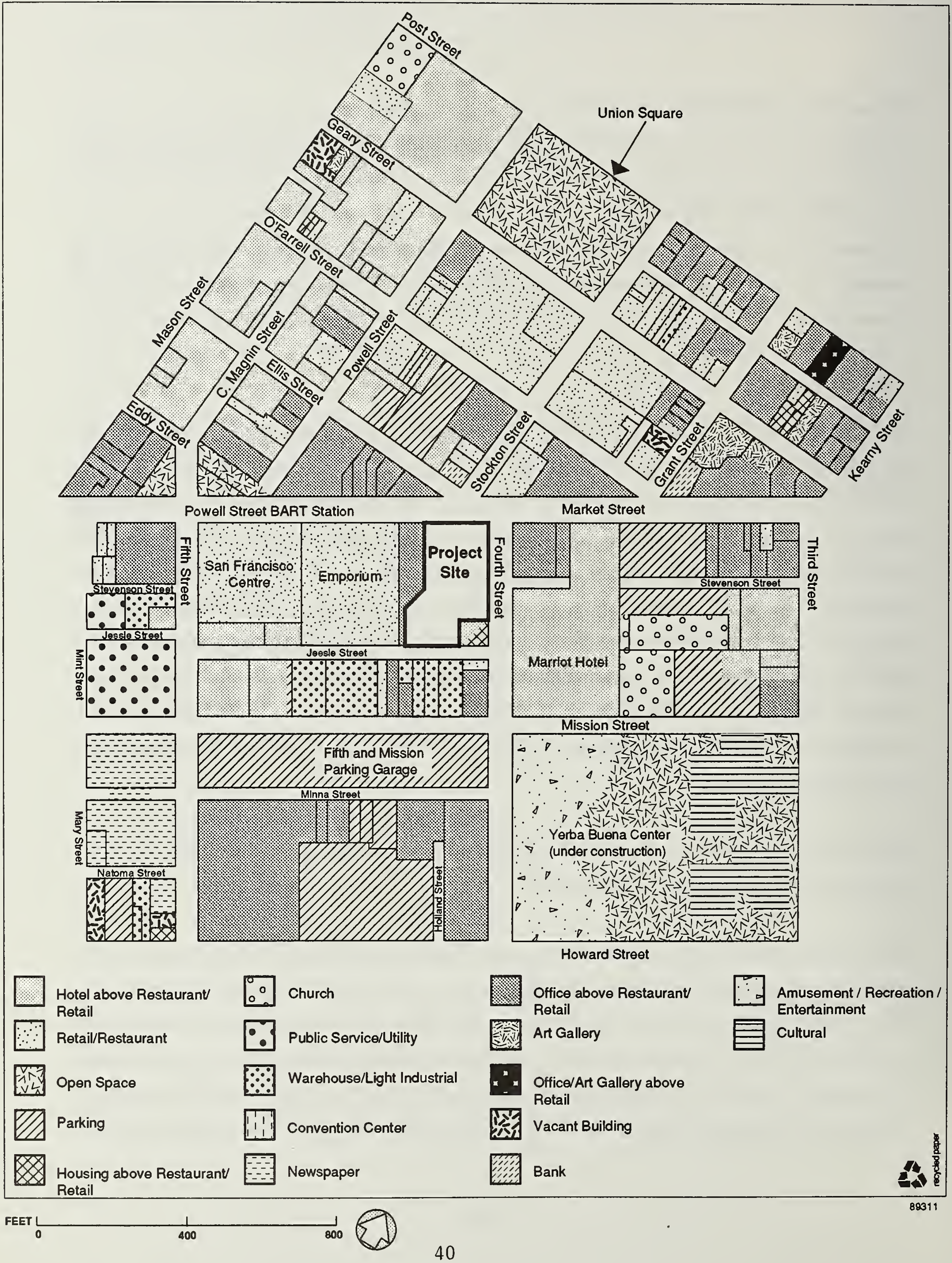
The proposed project would be located at 801 Market Street, at the southwest corner of the intersection of Fourth and Market Streets. The 67,763-square-foot (sq. ft.) project site is located on Lots 1, 46 and 47 of Assessor's Block 3705. The project site is bounded by Market Street, Fourth Street, the Victorian Hotel at the northwest corner of Jessie and Fourth Streets, Jessie Street, and the 308 Jessie Street and 833 Market Street buildings (see Figure 10, page 40). The project site contains the nine-story, 254,000-sq.-ft. Pacific Building at the corner of Fourth and Market Streets (known as Pacific I); the 16-story, 275,000-sq.-ft. 22 Fourth Street building on Fourth Street between Market and Jessie Streets (known as Pacific II); and a loading dock, service area and two basement levels of parking containing 198 spaces on Jessie Street (known as Pacific III). The Victorian Hotel, an eight-story, 165-unit hotel is adjacent to the project site at the northwest corner of Fourth and Jessie Streets.

The project site is located both at the northern edge of the South-of-Market district, and at the western end of the lower-Market Street area.

The South-of-Market district is different from other parts of San Francisco in several respects. The street pattern is skewed approximately 45 degrees from the typical north-south and east-west orientation of most San Francisco grids. (For ease of description, and in line with local custom, the northeast-southwest oriented streets such as Mission and Howard are considered as east-west streets in this report, and the northwest-southeast oriented streets such as Fourth and Fifth Streets are considered as north-south streets.) The South-of-Market district is generally flat, and the blocks are

Pacific Center
Land Use Map

Figure 10



the largest in the City, measuring 825 ft. on the east-west streets and 550 ft. on the north-south streets.

Through conversion and new construction, the site vicinity, especially to the south and east, which has historically supported printing, wholesaling, light-industrial and residential uses, has become increasingly office oriented although examples of the original use types remain. The area differs from the Financial District north of Market Street in density, diversity of use and scale of development. Hotel uses, which predominate north of the project site around Union Square have also migrated southward to the site vicinity. Hotels within one block of the project site include the Victorian (formerly the Keystone), Marriott, Pickwick and Parc 55 (formerly the Ramada Renaissance). The identity and function of the lower-Market Street area is one of a central area for retail, office, hotel and cultural activity.

A variety of office, retail, restaurant and hotel uses surround the project site. To the west of the project site along Market Street are the 833 Market Street office building and the Emporium store and San Francisco Shopping Centre. To the east is the 39-story Marriott Hotel and St. Patrick's Church, followed by a mix of low- and mid-rise office towers, typically with ground-level retail and restaurant uses. To the south is the Yerba Buena Redevelopment Area, a portion of which is under construction at this time. Once completed, the Yerba Buena Center will contain a mix of office, retail, recreational, cultural, convention and residential uses (for a detailed discussion of the Yerba Buena Center project, please see Yerba Buena Center Subsequent EIR, Case No. 91.355E, on file at the Department of City Planning).

Other than the Yerba Buena Center project, the only other developments occurring within the project area include the Ellis/O'Farrell Parking Garage Expansion, and the 55 Fifth Street Hotel, both currently under construction. On May 2, 1990, the City Planning Department adopted and issued a Negative Declaration on a plan to increase the size of the Fifth and Mission Garage (Case No. 88.408E). The project as approved would add two additional floors of parking and convert approximately 35,000 sq. ft. of the ground-floor to retail space. There would be a net increase of 841 parking spaces on-site (from 1,774 to 2,615), the garage would be increased from five to seven stories in height (approximately 38 ft.), and entrances, exits and internal circulation would be reconfigured. The project description for that garage expansion calls for designing the structure to accommodate the potential construction of up to two overhead pedestrian bridges; one to be located mid-block over

Mission Street and the other to be located at the east side of the building over Fourth Street near the corner of Mission Street (see also Alternative F, Chapter VII of this EIR). The proposed expansion plan was approved by the San Francisco Redevelopment Agency Commission on May 20, 1992.

ZONING

The project site is in the C-3-R Downtown Retail District (see Figure 11, page 43). Principal permitted uses in this district include high-density office, retail and services. Development is permitted with a basic Floor Area Ratio (FAR) of 6:1. In the C-3-R district, pursuant to Sections 123, 124 and 128 of the *City Planning Code*, development greater than the basic 6:1 FAR, up to a maximum of 9:1, is allowable through Transfer of Development Rights (TDR) from sites in the same C-3-R zoning district that include architecturally significant buildings with unused potential floor area. All unused area applicable to the FAR of the preservation site could be transferred to a development lot subject to setback, sunlight access, separation between towers and any other limitations imposed pursuant to *City Planning Code* Section 309, Permit Review in C-3 Districts.

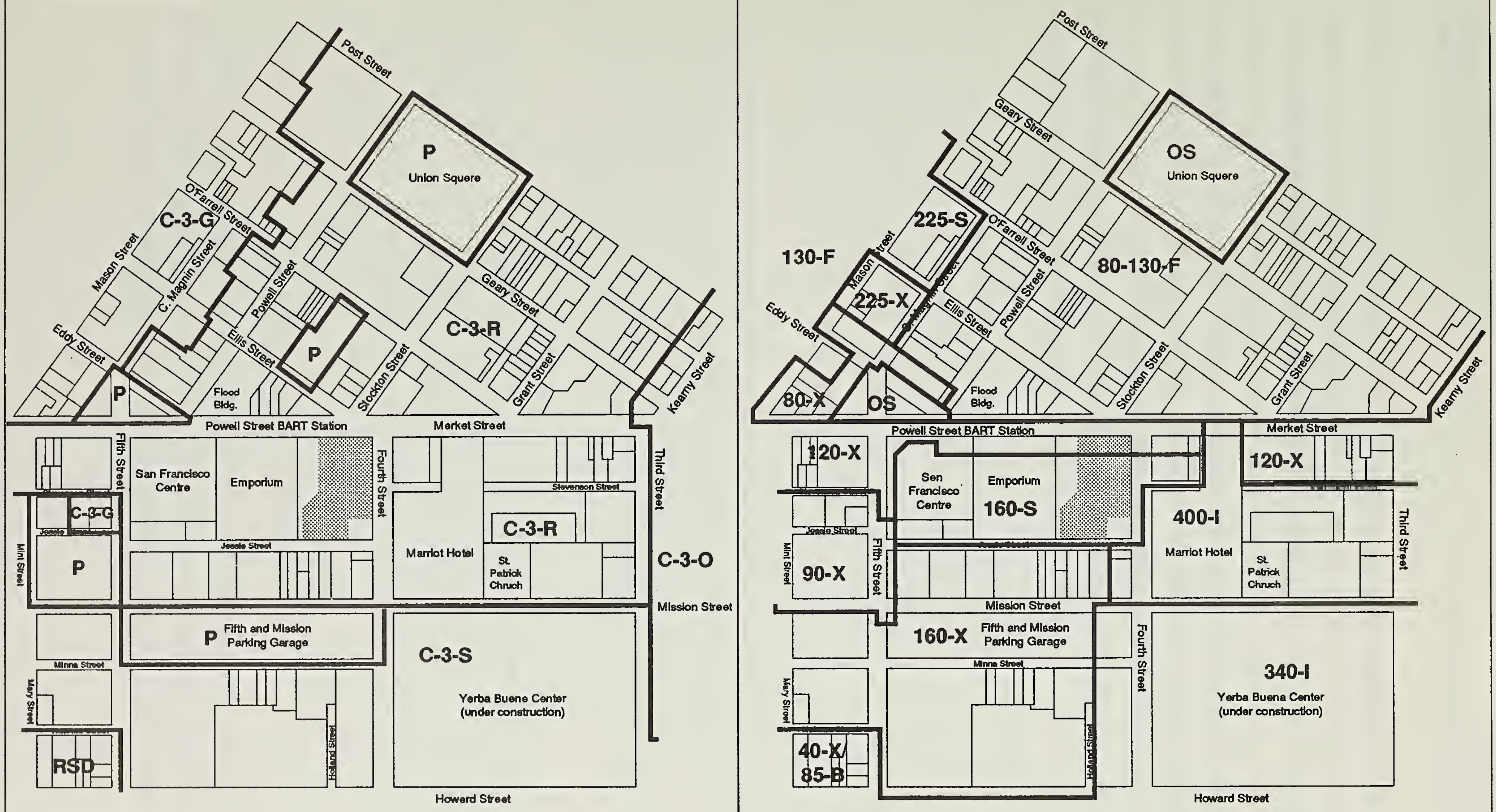
Zoning in the site vicinity includes C-3-R to the east and north, C-3-O (Downtown Office) further east (east of Third Street), C-3-S (Downtown Support) to the south and southeast (including Yerba Buena Center central and west block 2), and pockets of P (Public Use) north, northwest, west, and south of the site (the Ellis/O'Farrell Parking Garage and Union Square, Hallidie Plaza, the U.S Mint, and the Fifth/Mission Parking Garage, respectively).

The site is in the 120-X and 160-S Height and Bulk districts, in which the maximum allowable height is 120 ft. and 160 ft., respectively. In the X bulk district bulk limits do not apply. In the S bulk district, the maximum height of the base can be up to 1.25 times the width of the widest abutting street or 50 ft., whichever is more. The widest abutting street to the three combined lots of the project is Market Street, which is 120 ft. wide. Therefore, the maximum allowable height of the base portion of the project would be 150 ft. The maximum length and maximum diagonal dimension of the lower tower are 160 ft. and 190 ft., respectively. The average floor size is 17,000 sq. ft. and the maximum floor size is 20,000 sq. ft. The Pacific III portion of the project would be 160 ft. in height; therefore, all but the top floor would be considered the base portion. The top floor of Pacific III would be within the limits of lower tower bulk controls. Upper tower bulk controls would not apply to the project.

Pacific Center

Planning Code Use Districts and Height and Bulk Districts

Figure 11



LEGEND / Zoning

C-3-R	Downtown Retail	C-3-G	Downtown General Commercial
C-3-S	Downtown Support	RSD	Residential Service
C-3-O	Downtown Office	P	Public Use

▨ Project Site

Height and Bulk

B	Above 50 feet	S	Mandatory volume reduction at upper levels
F	Above 80 feet	X	Bulk limits not applicable
I	Above 150 feet	OS	Bulk limits determined by consulting Master Plan

SOURCE: EIP ASSOCIATES

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The *Downtown Plan* identifies six conservation districts in which review procedures apply for unrated as well as significant and contributory buildings. *City Planning Code* Section 1103 states that "portions of the C-3 District may be designated as conservation districts if they contain a substantial concentration of buildings that together create subareas of special architectural and aesthetic importance." One of these districts, the Kearny-Market-Mason-Sutter Conservation District (*City Planning Code*, Article 11, Appendix E), includes the Pacific I portion of the project site (Lot 1). A permit to alter a significant building (the Pacific Building) would be required prior to commencement of construction, pursuant to *City Planning Code* Sections 1111-1111.6. In addition, a determination of compatibility would be required to be made by the City Planning Commission in accordance with the provisions of Section 309.

B. ARCHITECTURAL AND HISTORIC RESOURCES

The project site contains two structures: the nine-story 801 Market Street building, known as the Pacific Building (Pacific I), and the 10-16-story 22 Fourth Street building (Pacific II). The remainder of the site is occupied by a loading dock and service area (Pacific III). Numerous buildings of architectural and historic significance in the site vicinity have been inventoried by three architectural surveys.

The San Francisco Department of City Planning (DCP) conducted a citywide inventory of architecturally significant buildings in 1976. In the 1976 DCP Architectural Inventory, approximately ten percent of the City's entire stock of buildings was awarded a rating for architectural merit ranging from a low of "0" to a high of "5". The buildings that were rated from "3" to "5" represent the highest two percent of the City's entire building stock.

The Foundation for San Francisco's Architectural Heritage conducted a survey which assigned ratings to buildings in the C-3 District. The survey rated buildings from "A" (Highest Importance) to "D" (Minor or No Importance). The criteria used in the evaluation were based on guidelines of the National Trust for Historic Preservation, the National Register of Historic Places, and the State Historic Resources Inventory.

The *Downtown Plan* categorizes historically and architecturally significant buildings into either Category I or II (significant buildings) or Category III or IV (contributory buildings). It is the intent of the Downtown Plan that those buildings categorized I, II, III, or IV are to be protected within the C-3 area. Appendix B, pages A-42-45, contains further explanation of the rating systems used by each of these three architectural inventories.

JUNIOR LEAGUE OF SAN FRANCISCO SURVEY

The Junior League of San Francisco completed a survey of historically and architecturally significant structures in San Francisco, Marin, and San Mateo counties in 1968. The Junior League survey did not assign ratings to individual buildings. The survey describes historic structures based on evaluation criteria including the structure's age, its association with an historic event or famous person, and whether it was a representative example of a particular style and/or the work of an important architect or builder. The results of the Junior League study are published in the book *Here Today*, recognized by the City as an official inventory of historic structures.

The Pacific Building on the project site was built in 1907; the architect was Charles F. Whittlesey and the contractor was the American Pacific Construction Company. The building is described by Heritage in *Splendid Survivors* as "the world's largest reinforced concrete office building when built, and one of the most literal examples of the influence of Louis Sullivan in San Francisco. A three part vertical block with differentiated end bays...the convergence of...two skeletal facades at a round corner bay, and the setting of the principal facades above a 2-story glass base. The ground floors are clad in red tile, the shaft in green tile, and the whole is trimmed in cream terra cotta." The Pacific Building is listed as a Category I-Significant Building in the *Downtown Plan* survey. Category I includes buildings which are at least 40 years old, judged to be of individual importance, and are rated either excellent in architectural design or very good in architectural design and relationship to the environment. This building is also rated "A" by the Heritage survey; "A" ratings are assigned to buildings considered to be the most important buildings in downtown, distinguished by outstanding qualities of architecture, historical values, and relationship to the environment. The Pacific Building is rated "4" in the 1976 DCP Inventory, is listed in *Here Today*, page 87, and appears eligible for listing on the National Register of Historic Places.

The existing condition of the Pacific Building facades has recently been evaluated by a qualified architectural consultant.[1] Although portions of the Market Street and Fourth Street facades are in good to excellent condition, moderate to significant damage has been observed at various locations. Extensive cracking of facade materials has occurred, and efflorescence near many of the cracks at the interior surface of the concrete walls is present, indicating long-term water leakage from the outside. Deterioration and loss of tiles, terra cotta and other forms of ornamentation has occurred, and plaster, paint and bitumen roofing material has been inappropriately applied to exterior surfaces. In addition, accumulated dirt has obscured the original color of the tile and terra cotta finishes.

The 22 Fourth Street building (Pacific II) on the project site was built in 1981; this building is not rated by any of the three architectural inventories. Pacific II is set back from Fourth Street at the ground level, and steps back beginning at the eleventh level. The building is clad in gray, precast concrete panels, and is without ornamentation.

Other buildings in the area rated by one or more of these architectural inventories include the Victorian Hotel at 54 Fourth Street (Heritage "B" rating, adjacent to the project site); the James Flood Building at 870 Market Street (San Francisco Landmark No. 154, *Downtown Plan* Category I, DCP "5" rating, Heritage "A" rating, listed in *Here Today*, and possibly eligible for the National Register of Historic Places, one block west); St. Patrick's Church at 756 Mission Street (San Francisco Landmark No. 4, DCP "3" rating, Heritage "A" rating, is listed in *Here Today*, and determined eligible for listing on the National Register of Historic Places, one-half block east); and the Phelan Building at 760 Market Street (San Francisco Landmark No. 156, *Downtown Plan* Category I, DCP "5" rating, Heritage "A" rating, listed in *Here Today*, and possibly eligible for the National Register of Historic Places, one-half block northeast).

In addition to the building-specific designations, The *Downtown Plan* identifies six conservation districts in which review procedures apply for unrated as well as significant and contributory buildings.

City Planning Code Section 1103 states that "portions of the C-3 District may be designated as conservation districts if they contain substantial concentrations of buildings that together create subareas of special architectural and aesthetic importance. Such areas shall contain substantial concentrations of Significant and Contributory Buildings and possess substantial overall architectural, aesthetic or historic qualities justifying additional controls in order to protect and promote those qualities." One of these districts, the Kearny-Market-Mason-Sutter Conservation District, includes the portion of the project site containing the Pacific Building. As described in the *City Planning Code*, "individual streets within the district have had unique histories which have often changed dramatically over time"; "The pattern of development is one of small-scaled, light-colored buildings predominantly four to eight stories in height"; and "The height and scale provide for a streetscape which is attractive to the pedestrian because of the comfortable scale and sunlit sidewalks. This dense area is the heart of San Francisco's retail and tourist sectors, containing a concentration of fine shops, department stores, theaters, hotels and restaurants."[2]

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1. Wiss, Janney, Elstner Associates, Inc., *Investigation of Facades, Pacific Building, San Francisco, California*, October 31, 1991. This investigation of the exteriors included a binocular survey, close inspection from two scaffold drops, petrographic examination of a spalled terra cotta ornament, and review of available drawings. The building's wood-framed windows were inspected from the interior. A copy of this report is on file and available for public review at the Department of City Planning, 450 McAllister Street, San Francisco.

2. *San Francisco City Planning Code*, Article 11, Appendix E, Sections 5(a) and 5(b).

C. URBAN DESIGN AND VISUAL QUALITY

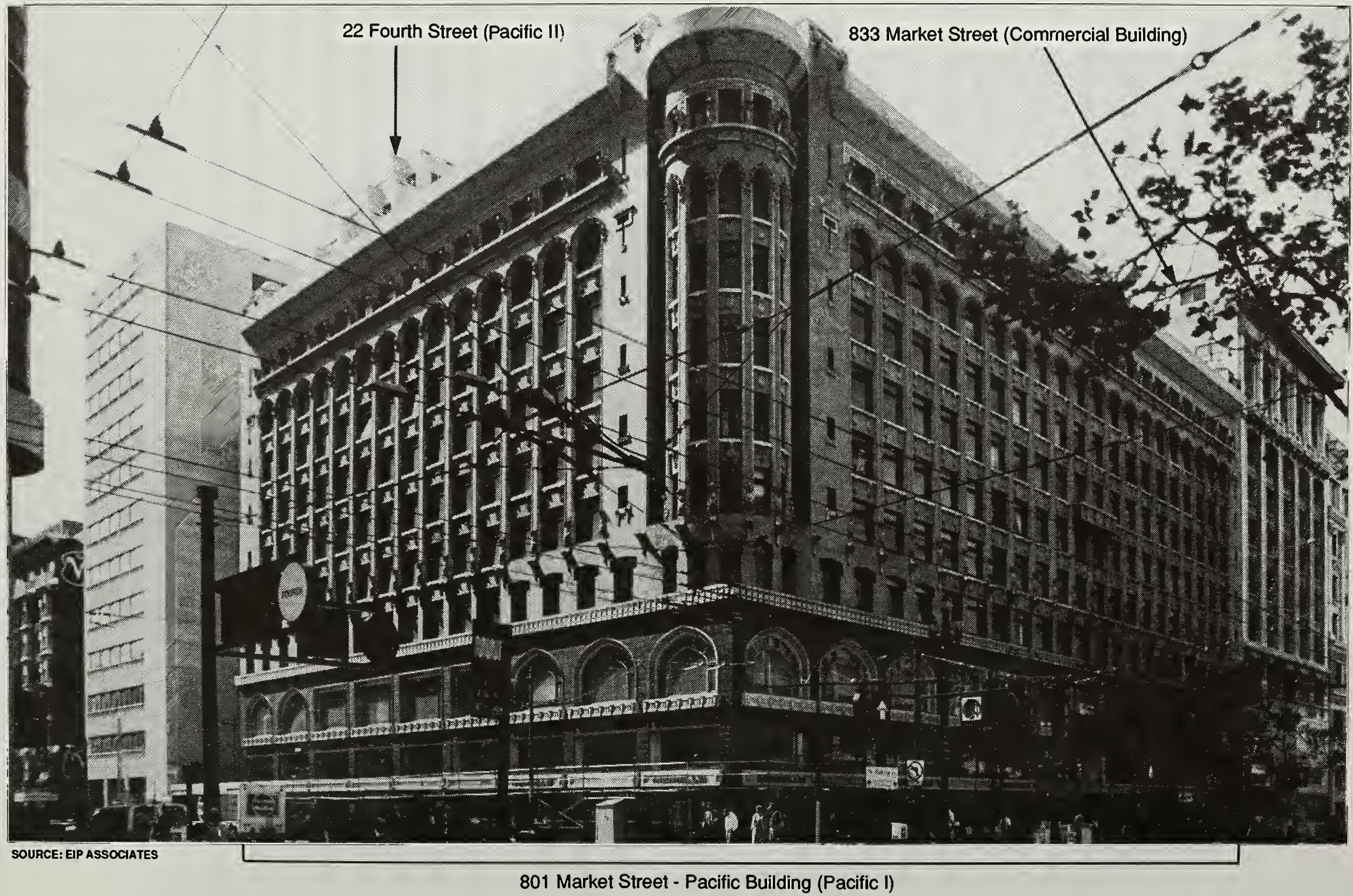
The project site contains two structures: the Pacific Building (Pacific I) at the southwest corner of Market and Fourth Streets; and the 22 Fourth Street building (Pacific II) mid-way between Market and Jessie Streets. The remainder of the site is occupied by a truck loading dock and parking area at Jessie Street (Pacific III). (See Figures 12-15, pages 50 to 53.) The Pacific II site is adjacent to the eight-story Victorian Hotel, located at the northwest corner of Fourth and Jessie Streets. The Pacific III site is located adjacent to the three-story 803 Jessie Street building. The Victorian Hotel and the 803 Jessie Street building are not part of the proposed project. The project site vicinity is an area containing a broad range of land uses including retailing, warehousing, wholesaling, office, hotel, residential and parking uses (see Chapter III.A, Land Use and Zoning). Correspondingly, there is a mix of architectural styles, building sizes and building masses that comprise the complex of structures within the setting. This mix has evolved through time as older structures have either been replaced with new buildings or renovated, and by the influence of changing architectural design trends and the use of new building materials introduced to the construction trade.

The eight-story Victorian Hotel (originally the Keystone Hotel), was built in 1915 as part of the Pan-Pacific World Exposition. The Victorian Hotel has an ornate red-brick facade, classically-styled bay windows and cornices, and architecturally-integrated fire escapes (it is rated "B" by Heritage).

Existing buildings on the project block include the nine-story Commercial Building adjacent to the Pacific Building, a three-part composition with Renaissance/Baroque ornamentation (rated "B" by Heritage), the seven-story Emporium Building at 833 Market Street, also a three-part composition with Renaissance/Baroque ornamentation (Category I (Significant) Building within the *Downtown Plan*, rated "A" by Heritage and "4" by DCP, listed in *Here Today*, and possibly eligible for listing in the National Register of Historic Places), the seven-story San Francisco Centre, a newer building with a detailed facade of dark and light grey marble and ornamental grille work (not rated), and the eight-story 55 Fifth Street building (built in 1913 as the Hotel Lankershim) which is gutted and currently undergoing renovation as a residential hotel (rated "C" by Heritage).

Pacific Center
View of Site Looking South Across Market and Fourth Streets

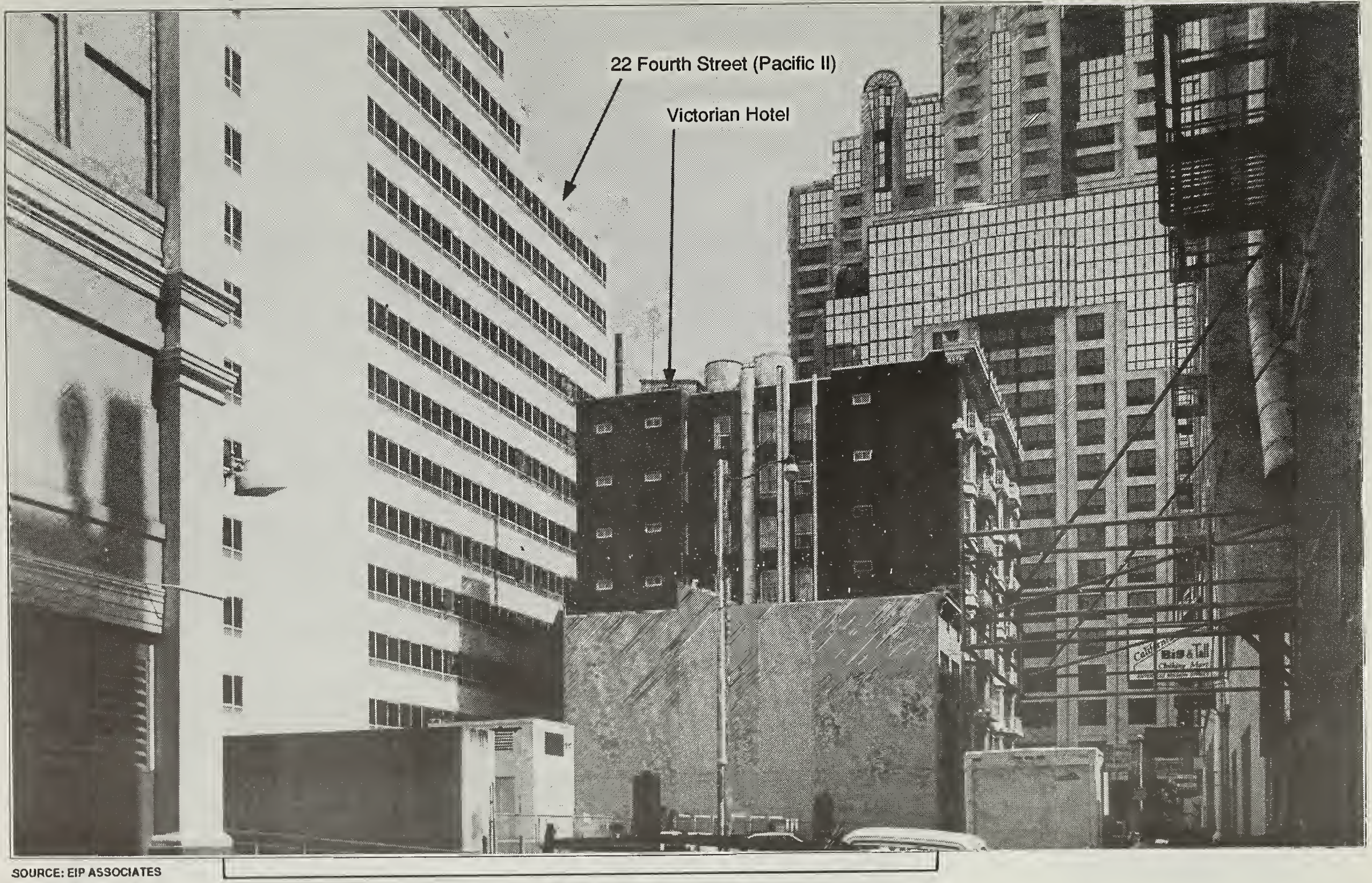
Figure 12


22 Fourth Street (Pacific II)
833 Market Street (Commercial Building)
801 Market Street - Pacific Building (Pacific I)

SOURCE: EIP ASSOCIATES

Pacific Center
View of Site Looking North from Jessie Street

Figure 13

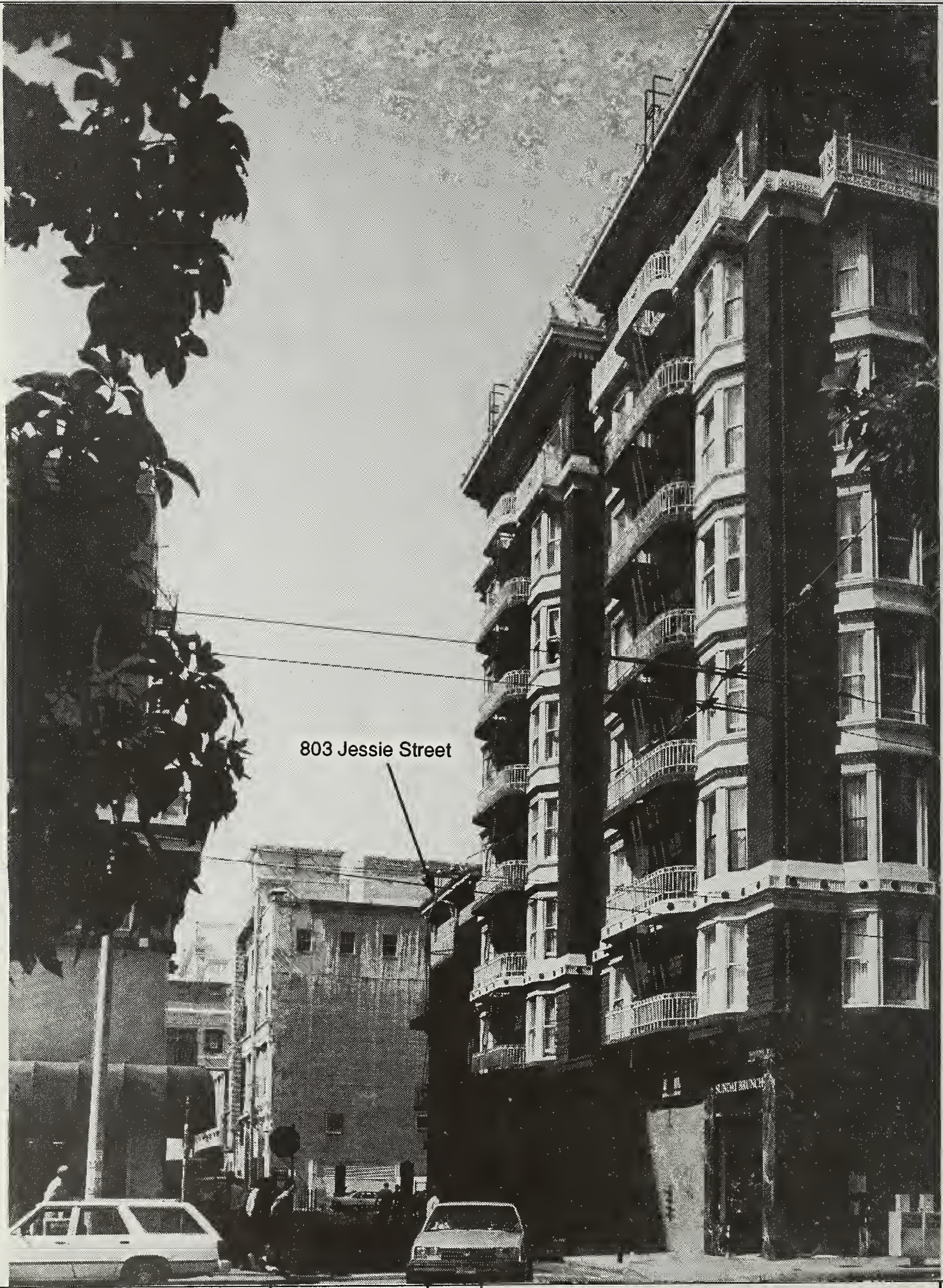


SOURCE: EIP ASSOCIATES

Pacific Center

View of Site Looking West Down Jessie Street from Fourth Street

Figure 14

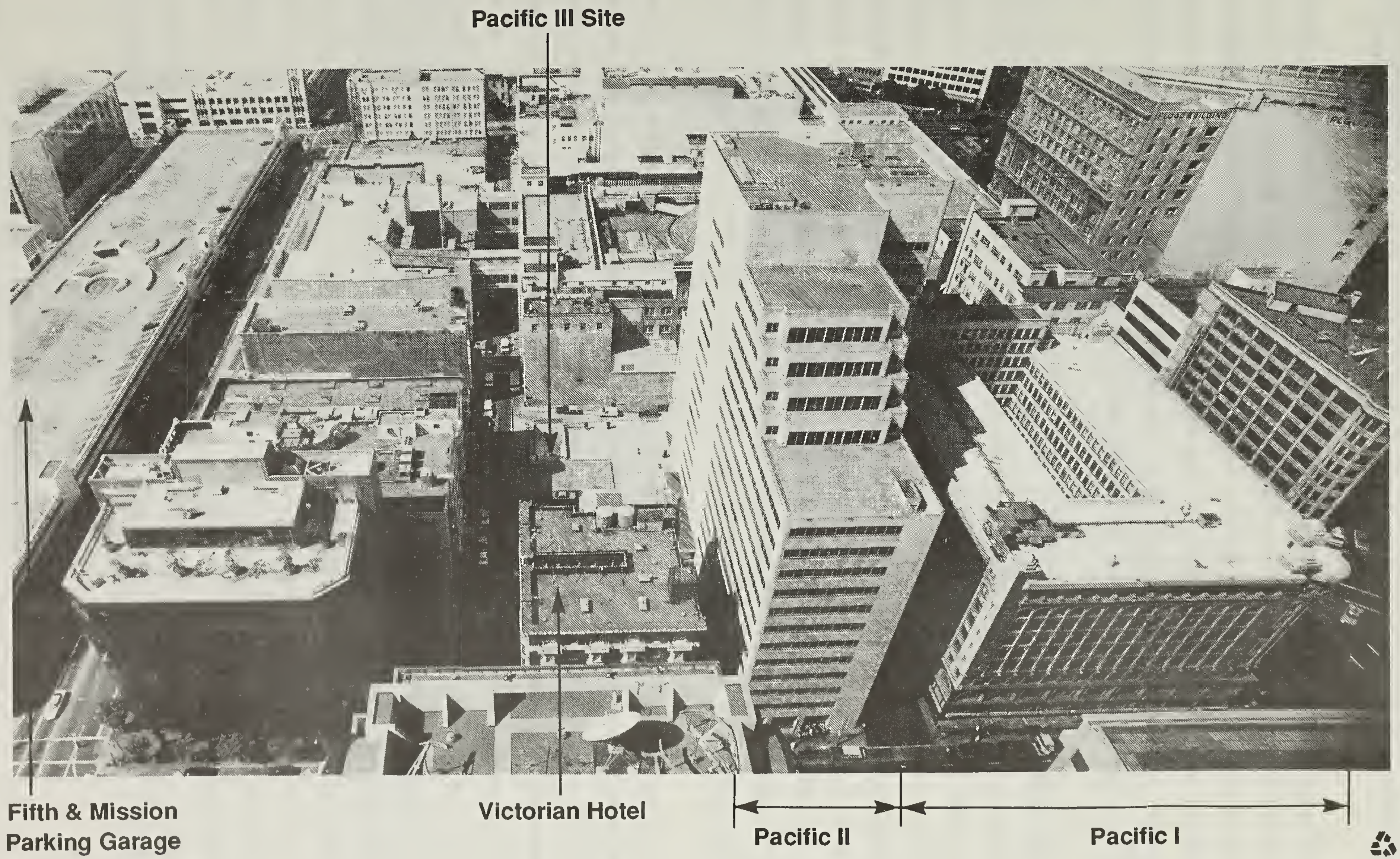


SOURCE: EIP ASSOCIATES

Pacific Center

Wide-Angle View of Site from the Marriott Hotel, Along Fourth Street

Figure 15



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SOURCE: SQUARE ONE FILM + VIDEO

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The Market Street sidewalk adjacent to the site is wide (effective width is 17 feet), normally providing partially restricted pedestrian movement and views of the historic Pacific Building; the Fourth Street sidewalk adjacent to the site, by contrast, is narrow (effective width is seven feet), with partially restricted pedestrian movement and less enjoyable views of the Pacific Building. At present, both sidewalks adjacent to the Pacific Building are encumbered with protective scaffolding, intended to prevent loose facade material from falling onto pedestrians below.

Across Market Street from the project site is the Ellis Street/Stockton Street intersection, and newer buildings ranging from three to eight stories in height. Buildings along Market Street near the site have light-to-medium color and facade materials including reddish and tan-colored brick and glass, concrete, and light-colored stone. Across Fourth Street from the project site is an eight-story, concrete and green glass office-above-retail building at the southeast corner of Fourth and Market Streets, and the 39-story Marriott Hotel, finished in reddish stone and reflective glass, with a Fourth Street frontage ranging from five to 17 stories in height. Across Jessie Street from the project site is a group of two- to ten-story buildings, and two mid-block bridges connecting The Emporium department store to its warehouses.

Views from the project site to the north are, in the foreground, of low-rise buildings along Market, Stockton and Ellis Streets. The upper portions of the St. Francis Hotel and the San Francisco Hilton Hotel are visible above the foreground structures. Views from the project site to the south are primarily of the Yerba Buena Center Redevelopment project area (the site of the future Yerba Buena Gardens), a portion of which is currently under construction. Views from the site to the southeast will ultimately be of the northeast corner of central block 2, the future site of a three-story retail/commercial building. The Esplanade portion of central block 2 would be visible from the upper floors of Pacific II and III. Views to the west are blocked by the 833 Market Street building, and views to the east are blocked by the Marriott Hotel.

D. SHADOW AND WIND

SHADOW

The two existing buildings on the site cast shadows on the streets and sidewalks in the project vicinity. Existing and project shadow patterns for various times of the day and year are discussed in detail in Chapter IV.D, Environmental Impacts, pages 69-134. Sunlight requirements under the *City Planning Code* for regulated spaces in the site vicinity are discussed on page 81.

WIND

U.S. Weather Bureau and Bay Area Air Quality Management District data show that westerly (i.e., from the west) to northwesterly winds are the most frequent and strongest winds during all seasons in San Francisco.[1] Of the 16 primary wind directions measured at the Weather Bureau station (at a height of 132 ft.), four directions comprise the greatest frequency of occurrence as well as the majority of strong wind occurrences; these are northwest, west-northwest, west and west-southwest. Calm conditions occur about two percent of the time.

Average wind speeds are highest in the summer and lowest during the winter months. However, strongest peak winds occur in winter, when speeds of 47 miles per hour (mph) have been recorded.[2] The highest average wind speeds are in the mid-afternoon, and the lowest are in the early morning.

Pedestrian Comfort and Wind Criteria

Wind conditions partly determine pedestrian comfort on sidewalks and in other public areas. In the downtown area, mid- and high-rise buildings can redirect wind flows around buildings and divert winds downward to street level; each can result in increased wind speed and turbulence at street level. The comfort of pedestrians varies under different conditions of sun exposure, temperature, clothing, and wind speed. Winds up to four mph have no noticeable effect on pedestrian comfort. With wind speeds from four to eight mph, wind is felt on the face. Winds from eight to 13 mph will disturb hair. For wind speeds from 19 to 26 mph, the force of the wind will be felt on the body. At 26 mph to 34 mph winds, umbrellas are used with difficulty, hair is blown straight, there is difficulty in walking steadily, and wind noise is unpleasant. Winds over 34 mph increase difficulty with balance and gusts can blow people over.[3]

In order to provide a comfortable wind environment for people in the downtown area, Section 148 of the *City Planning Code* establishes comfort criteria based on pedestrian-level wind speeds that include the effect of turbulence, referred to as "equivalent wind speeds." Section 148 sets comfort levels of seven mph equivalent wind speed for public seating areas, 11 mph equivalent wind speed for areas of substantial pedestrian use, and 26 mph equivalent wind speeds as a wind hazard criterion. New buildings and additions to buildings may not cause ground level winds to exceed these levels more than ten percent of the time year around between 7:00 a.m. and 6:00 p.m.[4] If existing wind conditions exceed the comfort level, new buildings and additions are required to be designed to reduce ambient wind speeds to meet the requirements.

Exceptions may be requested under Section 309 of the *City Planning Code.* However, no exception would be granted and no building or addition would be permitted that would cause wind speeds to exceed the hazard level, defined as an hourly average of 26 mph, for more than a single hour of any year.

Existing and project-generated wind conditions are discussed in Chapter IV.D., Environmental Impacts, pages 69-134 and Appendix F.

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1. The U.S. Weather Bureau data used in this analysis were originally gathered at the weather station atop the old Federal building at 50 United Nations Plaza during the years 1945-50. Data were taken hourly, annually for 16 wind directions. The data base, comprising of 32,795 hourly observations, is of sufficient length to provide a reliable estimate of future climatic conditions in San Francisco.

2. E. Jan Null, Climate of San Francisco, NOAA Technical Memorandum, NWS WR-126, February 1978.

3. Lawson, T.V. and A.D. Penwarden, *The Effects of Wind in the Vicinity of Buildings*, Proceedings of the Fourth International Conference on Wind Effects on Buildings and Structure, London, 1975, Cambridge University Press, Cambridge, U.K., pp. 605-622, 1976.

4. Section 148 of the *City Planning Code* specifies the hours of 7:00 a.m. to 6:00 p.m. The available weather data cover the hours of 6:00 a.m. to 8:00 p.m. Thus, observation from two additional evening hours and one additional morning hour are included in these data. Because winds are generally

stronger in the afternoon and evening than in the morning, this approximation is conservative; it is likely to overestimate the existing and projected wind speeds.

E. TRANSPORTATION

There are currently 198 parking spaces provided on-site. On-street and off-street parking characteristics were surveyed in June and November of 1991, during the non-holiday period, and in December 1991 during the holiday period.[1] The survey area was an area bounded by Fifth, Powell, Post, Kearny, Third and Howard Streets, with a "panhandle" extending down Fourth Street to Harrison Street. The current curbside parking utilization rates during the non-holiday period were recorded: the weekday midday peak hour utilization rate was 73 percent; the weekday P.M. peak hour utilization rate was 76 percent; and the weekend midday peak hour utilization rate was 94 percent. During the holiday period, the following curbside parking utilization rates were recorded: 83 percent during the weekday midday peak hour; 85 percent during the weekday P.M. peak hour; and 95 percent during the weekend midday peak hour.

Seventeen off-street parking facilities in the project area were also surveyed in June, November and December of 1991 to determine the utilization rates during the non-holiday and holiday periods. There are approximately 5,950 available off-street parking spaces at the seventeen facilities in the study area.[2] The survey results indicate during the non-holiday period, occupancy rates are about 85 percent during the weekday midday peak hour, 60 percent during the weekday P.M. peak hour, and 81 percent during the weekend midday peak hour. During the holiday period, occupancy rates are about 90 percent during the weekday midday peak hour, 83 percent during the weekday P.M. peak hour, and 91 percent during the weekend midday peak hour.

The site is served by local streets and by portions of the regional freeway system (see Figure 1, page 23). Access to the U.S. Highway 101 and the East Bay via the Bay Bridge is provided by an on-ramp at Fifth and Bryant Streets (approximately six blocks south of the site). Access to the freeway and the Peninsula and the San Francisco International Airport is provided by an on-ramp at Fourth and Harrison Streets (approximately four blocks south of the site). Traffic headed to the North Bay generally travels along Van Ness Avenue (U.S. 101) and Franklin Street or The Embarcadero to Bay Street. Access from the freeway system to the project site is provided by off-ramps at Fourth and Bryant Streets (approximately five blocks east of the site) and at Harrison and Fifth Streets (approximately five blocks south of the site).

In October 1989, an earthquake of Richter magnitude 7.1, the Loma Prieta earthquake, occurred. It had notable effects on the regional highway system. One span of the upper deck of the Bay Bridge collapsed, closing the bridge for one month for repairs. The double-decked Cypress structure on I-880 near downtown Oakland collapsed and has since been demolished. Traffic bound to the Bay Bridge from I-880 south of I-580 no longer has direct access to the bridge and is now redirected through I-580.

Within San Francisco, major damage to State Route 480 (Embarcadero Freeway), the I-280 extension north of the U.S. 101 interchange, and the U.S. 101 ramps between Fell and Turk Streets caused closure of these routes. The section of I-280 between Army Street and the Sixth Street ramps was repaired and reopened within a few months of the earthquake; however, the other facilities remain closed. Repair of the damaged section of I-280 began in 1991 and is expected to be completed in early 1993. Caltrans plans to retrofit the existing structure.[3]

In April 1990, then-Mayor Agnos proposed that the City demolish the elevated Embarcadero Freeway. Demolition of the structure was approved, initiated in February 1991 and completed in October 1991. The City, through the Chief Administrative Office and the Department of Public Works, is just beginning to analyze a variety of potential replacement projects for the demolished Embarcadero Freeway. The feasibility of implementing the Embarcadero Replacement Project and the sources of funding that would be required are being studied by City staff and will be subject to separate environmental review.

In addition, the "terminal separation structure," the elevated connector between the Bay Bridge and the Embarcadero Freeway, as well as its on- and off-ramps at Folsom Street, was scheduled for demolition beginning in November 1992. Caltrans District 4 plans to replace the terminal separation with a new structure (which would be lower in height than the existing structure) to enable traffic flow between the Bay Bridge and whatever roadway replacement is constructed within The Embarcadero right-of-way.[3]

Caltrans has also recently completed demolition of the U.S. 101 elevated structure (the Central Skyway) north of the Oak/Fell Street on- and off-ramps. That demolition resulted in removal of the Gough/Turk Streets on-ramp and the Franklin Street/Golden Gate Avenue off-ramp. The effects on surface streets of removing this portion of the freeway from service will depend on what replacement facility, if any, is agreed upon by Caltrans and the City of San Francisco, but could include alterations in the local traffic patterns in the vicinity of Civic Center and the area around Market Street and South Van Ness Avenue. Street improvements, including new signalization, would likely be made to surface streets designated as replacements for the demolished elevated portion of U.S. Highway 101.

The site is served by local streets and by portions of the regional freeway system. In the vicinity of the project site, Market, Mission, Howard, Folsom, Harrison, Post, Geary, O'Farrell, Ellis, Third, Fourth, Fifth, Stockton, and Powell Streets are designated as Transit Preferential Streets, on which priority is given to transit vehicles over autos during commute and business hours on weekdays.[4] Howard, Folsom, Harrison, Third, Fourth and Fifth Streets are designated as Primary Vehicular Streets, which the *Master Plan* defines as "major routes for automobile and truck movements into and out of the Downtown area." Jessie, Fifth, Powell, Stockton, Grant, O'Farrell, and Geary Streets are designated "Pedestrian Oriented Vehicular Streets" in the *Master Plan*; the *Master Plan* states that on these streets certain design measures should be taken to improve mobility and render existing pedestrian space more pleasant and efficient.

Market Street is a two-way east/west arterial with three eastbound and two westbound moving lanes at Fourth Street. Mission Street also operates as an east/west roadway with two moving lanes in each direction at Fourth Street. San Francisco Municipal Railway (MUNI) lines operate above and below surface and Bay Area Rapid Transit (BART) operates below surface along this thoroughfare. San Mateo County Transit (SamTrans) lines operate on surface along this thoroughfare. Left turns from this arterial are prohibited with an exception for buses.

Harrison Street operates as a westbound arterial with five moving lanes at Fourth Street. Post Street operates as an eastbound street with four moving lanes at Stockton Street. Geary Street operates as a westbound roadway with three moving lanes at Stockton Street. O'Farrell Street operates as an eastbound arterial with four moving lanes at Stockton Street. Ellis Street is a two-way east/west street with one moving lane in each direction at Powell Street.

Third Street operates as a one way northbound roadway with four moving lanes at Mission Street. The MUNI line numbers 15, 30, and 45 operate on surface along this thoroughfare. Fourth/Stockton Streets operates as a one way southbound street with two moving lanes at Market Street and one exclusive right turn lane onto Ellis Street. The MUNI lines 30 and 45 operate on surface along this thoroughfare. Fifth Street operates as a two-way north/south roadway with two moving lanes in each direction at Mission Street.

Grant Street operates as an northbound arterial with two moving lanes at Geary Street. Powell Street operates as a two-way north/south roadway with one moving lane in each direction at O'Farrell. Powell Street terminates south of Ellis Street without linking to Market Street. MUNI's Powell-Mason (PM) and Powell-Hyde (PH) Cable Car lines operate along this thoroughfare, terminating south of Ellis Street at the Cable Car Turnaround.

The site is served by San Francisco Municipal Railway (MUNI) electric trolley and motor coach lines, providing radial service to and from the downtown area. MUNI bus lines operate on Market, Mission, Fourth and Fifth Streets in the near project vicinity. The closest MUNI bus stop is adjacent to the site on Fourth Street, serving the 30-Stockton, 45-Union-Stockton and 9X-San Bruno Express lines. MUNI Metro light-rail vehicle lines are accessible via the Powell Street station located one-half block west of the site on Market Street. Transit routes in the project vicinity are shown on Figure 16, page 62.

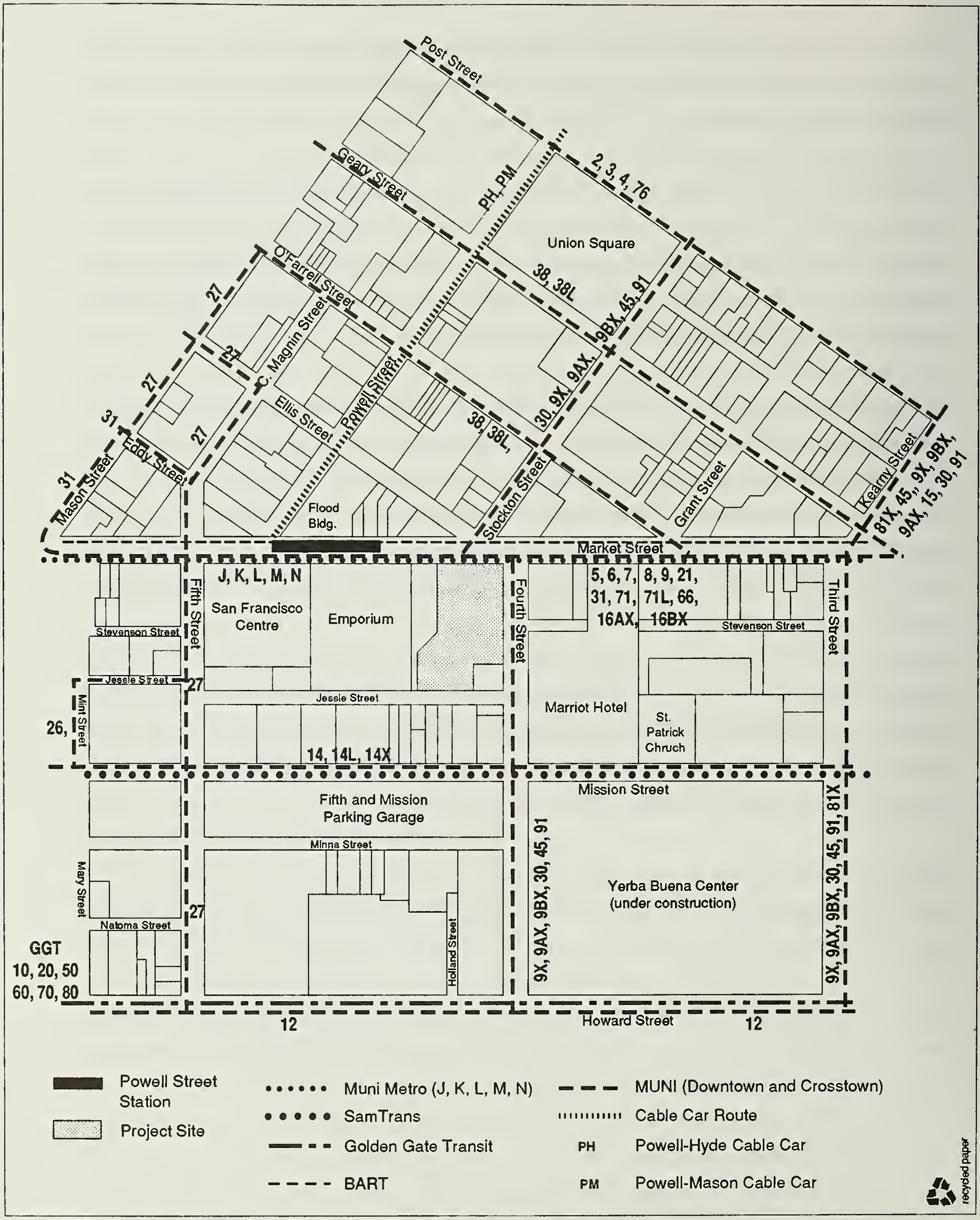
Regional transit service to the site is provided to and from the East Bay by the Bay Area Rapid Transit District (BART), at the Powell Street Station on Market Street (about one-half block west of the site), and by AC Transit motor coaches at the Transbay Terminal on Mission Street at First Street, about three and one-half blocks east of the project site.

Service to the Peninsula is provided by CalTrain from the train terminal at Fourth and Townsend Streets; by the San Mateo County Transit District (SamTrans), with bus routes and stops along Mission Street; and by BART, which provides transfers to SamTrans routes at the Daly City BART Station.

The Golden Gate Bridge, Highway and Transportation District (Golden Gate Transit) provides A.M. and P.M. peak-period bus service from/to Marin and Sonoma Counties. The closest boarding stops are along Howard and Folsom Streets, respectively, two and three blocks south of the site.

Pacific Center
Transit Routes in Project Area

Figure 16



SOURCE: MUNI SAN FRANCISCO STREET AND TRANSIT MAP; GOLDEN GATE TRANSIT BUS AND FERRY SYSTEM MAP; SAMTRANS BUS ROUTE MAP; AC TRANSIT BASIC MAP; AND EIP ASSOCIATES

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Discharge stops are located along Folsom Street, at the Transbay Terminal, and along Battery Street. Golden Gate Transit provides ferry service to terminals in Larkspur and Sausalito from the Ferry Building, about ten blocks from the project site. It operates shuttle service from the Ferry Building to the Financial district and the South of Market area. Golden Gate Transit also operates a vanpool and club (subscription) bus program to areas not served by fixed routes.

The RIDES carpool program, operating as a nonprofit, publicly funded corporation, provides consulting and matching services to help establish Bay Area carpools and vanpools.

Market, Mission, Howard, Folsom, Geary, O'Farrell, Third and New Montgomery Streets are designated as Preferred Commute Bike Routes in the *Transportation Element* of the City's *Master Plan*. Of these streets, only Howard and Folsom Streets are currently striped with bicycle lanes.

This site is located inside of the Downtown Core automobile control area designated in the San Francisco *Master Plan*. A Plan goal is to reduce the number of private commuter vehicles in this area and excess automobile traffic in the downtown core. The site is also within one block of an area designated as a Parking Belt in the Downtown Transportation Plan of the San Francisco *Master Plan*. Parking belts are areas that the *Plan* identifies as appropriate for short-term parking facilities to replace spaces removed from the core area.

A survey of existing pedestrian volumes in the project vicinity was conducted during non-holiday and holiday periods.[1] The survey included sidewalks, crosswalks and corners (known as pedestrian elements), at five local intersections: Fourth/Market; Fifth/Market; Fourth/Mission; Fifth/Mission; and Stockton/O'Farrell. On a non-holiday day, all pedestrian elements currently operate in unimpeded conditions (Level of Service (LOS) C or better) during peak periods, with the exception of the southwest corner of Fourth/Mission which operates at LOS D. (See Appendix C, Table C-3, p. A-49, for an explanation of pedestrian flow rates and levels of service. Figure C-2, pp. A-58-59, shows photographs of sidewalk conditions for each flow regime.) During holidays, sidewalks and crosswalks continue to operate in unimpeded conditions during peak hours. The following corners operate at LOS D or worse during holiday peak periods: the southwest corner of Fourth/Mission; the southeast corner of Fifth/Mission; and all four corners of Stockton/O'Farrell.

The Negative Declaration for the expansion of the Fifth and Mission Parking Garage (discussed in endnote 2 of this chapter) indicated that about 15 percent of the P.M. peak hour pedestrian traffic generated by the existing garage (and the expanded garage) use mid-block crosswalks across Mission Street, west of Fourth Street. This mid-block crossing is marked, but nevertheless presents a hazardous situation to pedestrians as there is no signal. Marking of this crosswalk could itself enhance this hazardous situation, as it gives pedestrians a sense of security in crossing the street. A mid-block traffic signal on Mission Street at the entry/exit of the Fifth and Mission Parking Garage has been proposed by the San Francisco Department of Parking and Traffic.

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1. Korve Engineering, Inc., Pacific Center Transportation Analysis, December 16, 1992, prepared in consultation with the San Francisco Department of City Planning. A copy of this report is on file and available for public review at the Department of City Planning. Field surveys were conducted as part of the transportation analysis by Korve Engineering, Inc. staff during June, November and December 1991, when events were being held at the Moscone Convention Center.

2. On May 2, 1990, the City Planning Department adopted and issued a Negative Declaration on a plan to increase the size of the Fifth and Mission Garage (Case No. 88.408E). The project would add two additional floors of parking and convert approximately 35,000 sq. ft. of the ground-floor to retail space. There would be a net increase of 841 parking spaces on-site (from 1,774 to 2,615). The proposed expansion plan was approved by the Redevelopment Agency Commission on May 20, 1992, and the project parking analysis assumes that the 841 parking spaces are part of the off-street parking supply in the existing plus project and cumulative scenarios.

3. Earl Sherman, Caltrans District 4 Public Information Officer, telephone conversation, November 9, 1992.

4. San Francisco Department of City Planning, *Transportation, an Element of the Master Plan*, November 1984, and *Downtown Plan, and Area Plan of the Master Plan*, December 1987.

F. AIR QUALITY

The Bay Area Air Quality Management District (BAAQMD) operates a regional monitoring network which measures the ambient concentrations of six air pollutants: ozone (O_3), carbon monoxide (CO), particulates (both fine particulate matter [PM_{10}] and total suspended particulates [TSP]), lead (Pb), nitrogen dioxide (NO_2), and sulfur dioxide (SO_2). On the basis of the monitoring data, the Bay Area, including San Francisco, is designated a non-attainment area with respect to the federal ozone and CO standards. In addition, San Francisco occasionally experiences violations of state eight-hour CO and PM_{10} standards. A four-year summary of the data collected at the BAAQMD monitoring station nearest the project site (about 1.4 miles south at 10 Arkansas Street) is shown in Appendix D, p. A-62, together with the most stringent corresponding state and/or federal ambient air quality standards in San Francisco. During 1990, there were no violations of the state or federal eight-hour CO standards, and there were 12 violations of the state 24-hour average PM_{10} standards. During 1989, there were no violations of the state or federal eight-hour CO standards, and there were 13 violations of the state 24-hour average PM_{10} standards. During 1988, there was one violation of the state and federal eight-hour CO standard and five violations of the state 24-hour average PM_{10} standard in San Francisco. In 1987, there was one violation of the state and federal eight-hour average CO standard and four violations of the state PM_{10} standards.[1]

Carbon monoxide concentrations are monitored from the 10 Arkansas Street areawide monitoring station and from 939 Ellis Street, which is located along Van Ness Avenue, a heavily-travelled corridor.

BAAQMD has conducted several CO "hotspot" monitoring programs in the Bay Area, including two in San Francisco. One CO monitoring program was conducted during the winter of 1979-1980 at the intersection of Washington and Battery Streets, about 1.3 miles northeast of the site.[2] The high eight-hour average concentration was 10.1 ppm, which violated the 9-ppm state and federal standards by 1.1 ppm. The high one-hour average concentration of 15 ppm did not violate the 20-ppm state standard or the 35-ppm federal standard. Another CO monitoring program was conducted during the winter of 1980-1981 at the intersection of Geary and Taylor Streets, about 0.5 miles northwest of the site, and 100 Harrison Street at Spear, about 1.5 miles east of the site.[3] At Geary and Taylor

Streets the observed high eight-hour average concentration was 11.5 ppm, which violated the standards by 2.5 ppm, and the high one-hour concentration was 15 ppm, which did not violate the standards. At Harrison Street the observed high eight-hour and one-hour average concentrations were 7.8 ppm and 13 ppm, respectively, which did not violate the standards. In December 1985, the City of San Francisco monitored CO and counted traffic at the intersection of Sixth and Brannan Streets, about 1.3 miles from the project site. This data, along with CO background data from the Potrero District air quality station, was used to correlate the relationship between traffic and CO emissions. Data from these two monitoring locations indicate that areas in San Francisco near streets with high traffic volumes and congested flows may experience violations of the eight-hour CO state and federal standard under adverse meteorological conditions.

Comparison of these data with those from other BAAQMD monitoring stations indicates that San Francisco's air quality is among the least degraded of all the developed portions of the Bay Area. Three of the four prevailing winds blowing off the Pacific Ocean, west, northwest, and west-northwest, reduce the potential for San Francisco to receive pollutants from elsewhere in the region.

Data from monitoring within San Francisco show that there have been occasional local violations of state and federal CO and state (but not federal) fine particulate standards, due largely to air pollutant emissions from within the City. Carbon monoxide is a non-reactive air pollutant, and its major source is motor vehicles. Carbon monoxide concentrations are generally highest during periods of peak traffic congestion. Particulate levels are relatively low near the coast, increase with increasing distance from the coast, and peak in dry, sheltered valleys. The primary sources of particulates in San Francisco are demolition and construction activities, and motor vehicle travel on paved roads.

San Francisco, like all other sub-regions in the Bay Area, contributes to regional air quality problems, primarily ozone, in other parts of the Bay Area. Ozone is not emitted directly from sources, but is produced in the atmosphere over time and distance through a complex series of photochemical reactions involving hydrocarbons (HC) and nitrogen oxides (NO_x) emissions, which are carried downwind as the photochemical reaction occurs. Ozone standards are violated most often in the Santa Clara, Livermore, and Diablo Valleys because local topography and meteorological conditions favor the buildup of ozone and its precursors there.

In 1983, emissions from motor vehicles were the source of 87 percent of the CO, 39 percent of the HC, 62 percent of the total suspended particulates (TSP), 9 percent of the sulfur oxides (SO_x), and 54 percent of the NO_x emitted in San Francisco.[4] These percentages are expected to apply reasonably well to current conditions.

In response to the Bay Area's ozone and CO non-attainment designations, the Association of Bay Area Governments (ABAG), BAAQMD, and the Metropolitan Transportation Commission (MTC) prepared and adopted the *1982 Bay Area Air Quality Plan (1982 Plan)*.[5] The *1982 Plan* established schedules and strategies to comply with federal ozone and carbon monoxide standards established under the Clean Air Act by December 31, 1987. The deadline has now passed, and the Bay Area remains a non-attainment area for ozone and CO (standards are occasionally violated). The Clean Air Act amendments of 1990 require that within three years of enactment (November 15, 1990), the State submit to the U.S. Environmental Protection Agency (EPA) a revised State Implementation Plan.

Effective January 1, 1989, the California Clean Air Act provides for the designation of districts by pollutant into three classes: moderate (defined as a district that the California Air Resources Board (ARB) determines can attain and maintain the state air quality standards by December 31, 1994), serious (a district that the ARB determines cannot attain the state air quality standards until after December 31, 1994 but by no later than December 31, 1997), and severe (a district that the ARB determines cannot attain the state air quality standards until after December 31, 1997, or is unable to specify an attainment date). In each case, the Act specifies air pollutant control strategies that must be adopted. In all cases, plans are required to demonstrate a five percent reduction per year in district-wide emissions for each non-attainment air pollutant or its precursors, unless the ARB determines that the alternative emission reduction strategy is equal to or more effective than district-wide emission reductions in improving air quality or that, despite inclusion of every feasible measure and an expeditious adoption schedule, the district is unable to achieve a five percent reduction per year. The Bay Area Basin has been designated as severe for ozone, due to its inability to attain state standards by 1997 and serious for CO, due to its inability to meet state standards by 1994.[6]

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[1] State standards for particulate matter changed in 1983 and federal standards changed in 1987 to concentrate on respirable particulate matter (PM_{10}) which has been demonstrated to have health implications when inhaled. The previous State and federal particulate standards were 100 micrograms per cubic meter ($\mu g/m^3$) and 260 $\mu g/m^3$ of particulates, respectively. The present state and federal PM_{10} standards are 50 $\mu g/m^3$ and 150 $\mu g/m^3$, respectively, of respirable particulate matter. Although both the previous and present particulate standards are measured in $\mu g/m^3$, under the PM_{10} standards only those particulates 10 microns or less in size are measured. The BAAQMD (Thomas Perardi) has stated that TSP includes about 50% to 60% of particulates of 10 microns or less; thus, the TSP standards are generally equivalent to the PM_{10} standards. BAAQMD is presently monitoring PM_{10} at seven Bay Area monitoring stations, including the station at 16th and Arkansas Streets in San Francisco.

[2] Association of Bay Area Governments (ABAG), AQMP Tech Memo 33, "Summary of 1979/80 Hotspot Monitoring Program," Berkeley, California, June 1980.

[3] Association of Bay Area Governments, AQMP Tech Memo 40, "Results of the 1980/81 Hotspot Monitoring Program for Carbon Monoxide," Berkeley, California, January 1982.

[4] Bay Area Air Quality Management District (BAAQMD), "Base Year 1983 Emissions Inventory, Summary Report," San Francisco, California, August 1987.

[5] Association of Bay Area Governments, BAAQMD, and MTC, *1982 Bay Area Air Quality Plan*, Berkeley, California, December 1982.

[6] Patrick Navis, California Air Resources Board (ARB) Liaison to the BAAQMD, California Air Resources Board, telephone conversation, January 8, 1991.

IV. ENVIRONMENTAL IMPACTS

An application for environmental evaluation for the project was filed on March 29, 1991. An Initial Study of the proposed project was published on February 27, 1992, and it was determined that an Environmental Impact Report (EIR) would be required for the project. Issues determined to require no further discussion as a result of the Initial Study include land use and zoning, glare impacts on other properties, population and housing, operational noise, construction air quality, biology, geology/topography, water, utilities/public services, energy/natural resources, hazards, and cultural resources. Therefore, this EIR does not discuss these issues. (See Appendix A, page A-1, which contains the Initial Study.) A discussion of Land Use and Zoning is included (see Chapter III. Environmental Setting, pages 39-68) for informational purposes, to provide the context for evaluation of the project.

Not all of the impacts presented in this section are physical environmental effects as defined by the California Environmental Quality Act (CEQA). Non-physical effects are included here for informational purposes only.

A. ARCHITECTURAL AND HISTORIC RESOURCES

The Pacific Building on the project site is listed as a Category I-Significant Building in the *Downtown Plan* survey, received an "A" rating in the Heritage survey, and was rated "4" in the 1976 Department of City Planning Architectural Inventory. Appendix B, pages A-42-45, contains a discussion of the rating systems used in these three architectural inventories.

The Market Street and Fourth Street facades of the Pacific Building would undergo architectural restoration and seismic reinforcement. The cornice and corner crowning element would be restored to their original design, and a new steel and glass canopy patterned after the original would be added to the new main entrance at the corner of Market and Fourth Streets. The interior structure of this building would be demolished and reconstructed with floorplates continuous with the reconstructed floors of Pacific II, and newly constructed Pacific III. The remodelled structure would be organized around a seven-story skylighted courtyard, off of which would be located the project's retail stores and restaurants. The roof of Pacific I would be landscaped for public use as an open space roof terrace of about 7,585 sq. ft.

Changes proposed for the Pacific Building would be required to follow the standards set forth for the alteration of buildings designated significant or contributory in *City Planning Code* Article 11, Section 1111.6. The project sponsor intends to conduct architectural restoration of the Pacific Building facades based on the recommendations of the architectural consultant[1] and the Landmarks Preservation Advisory Board (LPAB).[2] This program is proposed to include, but not be limited to: removal of accumulated dirt and inappropriately applied paint, plaster and roofing material; and reparation of cracks, reparation or replacement of damaged ornamentation, and repointing open or deteriorated mortar joints.

The project sponsor intends to purchase about 80,000 sq. ft. of transferable development rights (TDR) from as yet unidentified sites within the C-3-R zoning district, that include architecturally significant buildings with unused potential floor area (*City Planning Code* Sections 123, 124 and 128). The use of TDR as a planning tool ensures "the maintenance of sufficient development potential in the C-3 District to accommodate orderly growth and preserve a compact downtown, and to balance the public and private interests affected by the [*Downtown Plan's*] preservation policies." (San Francisco *Master Plan, Downtown Area Plan*, p. II.1.26.)

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[1] Wiss, Janney, Elstner Associates, Inc., *Investigation of Facades, Pacific Building, San Francisco, California*, October 31, 1991. A copy of the report is on file and available for public review at the Department of City Planning, 450 McAllister Street, San Francisco.

[2] The project architects have met with the Architectural Review Committee of the LPAB on at least three occasions, to present preliminary plans for restoration/reconstruction of the Pacific Building. The committee has tentatively accepted the plans for interior demolition, recreation of floor levels, primary access via a corner entry at Fourth/Market, and cornice restoration. The plans have not yet been presented to or considered by the full Board.

B. URBAN DESIGN AND VISUAL QUALITY

The project would restore the 1907 Pacific Building (Pacific I) facades along Market and Fourth Streets, extensively remodel the 1981 22 Fourth Street building (Pacific II), and construct a new, ten-story structure adjacent to Pacific II, fronting onto Jessie Street (Pacific III). The interior structures of Pacific I and II would be rebuilt, and would be integrated with Pacific III as a single structure.

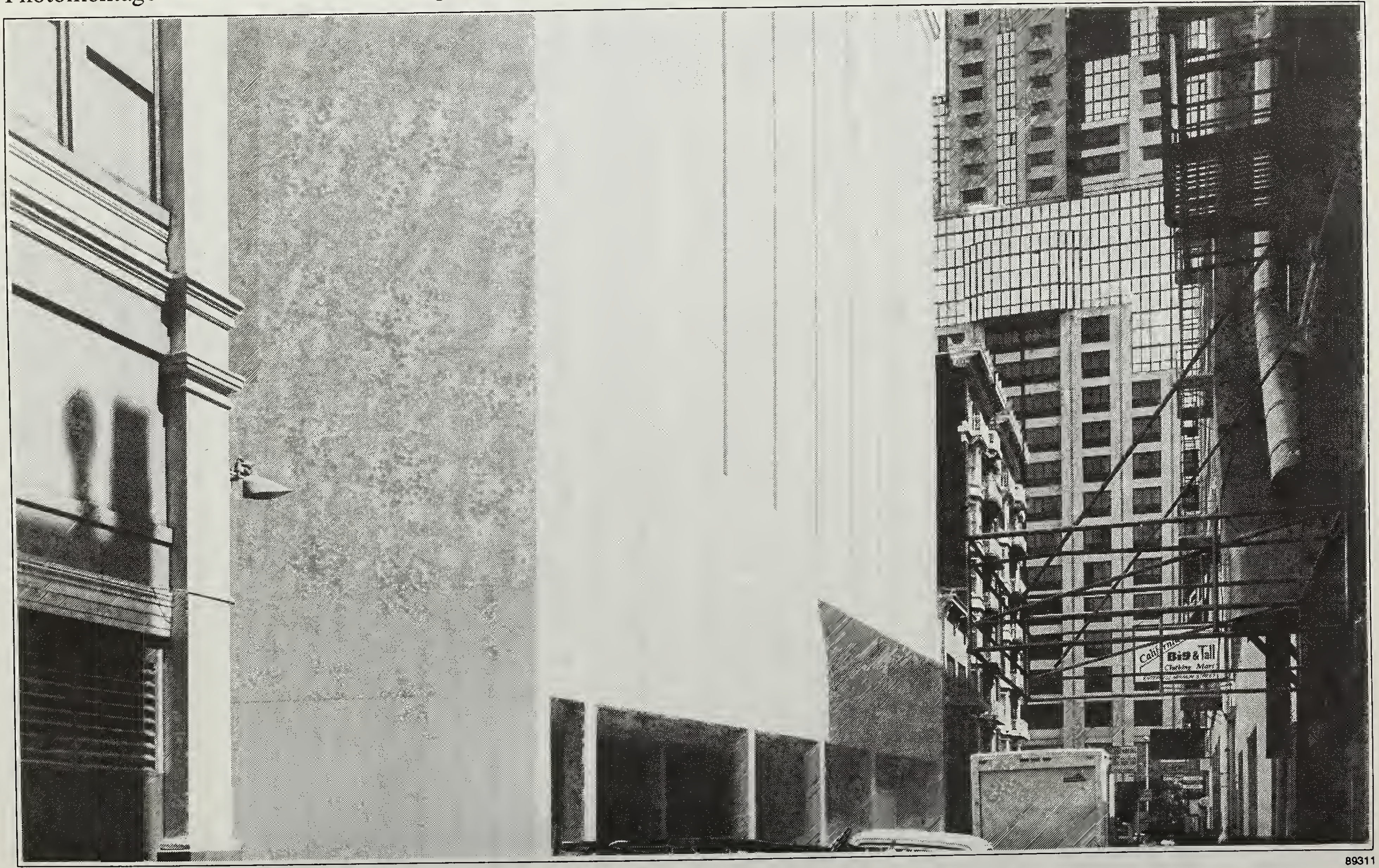
The proposed changes to the Pacific I and II portions of the site, although extensive, would not substantially alter the building envelope of these structures. The Pacific I building, at the southwest corner of Market and Fourth Streets, would be reconfigured as a main entry into the project with a redesigned arcade entrance. A new glass dome (partially visible from the street) would be added at the top of the courtyard. Consequently, the overall urban design and visual quality effects along Market and Fourth Streets would be negligible (see Figure 12, page 50). The scale of development in the area would not be affected, and views currently enjoyed would not be blocked. Restoration of the historic Pacific Building facades, which are currently in disrepair, would represent an improvement to their existing condition, particularly from short-range vantage points.

The gray, pre-cast concrete panel exterior of Pacific II would be stripped from the lower ten floors, and replaced with a facade design integrated with the new Pacific III structure, such that Pacific II and III would read as one building. A combination of granite cladding with bronze framed windows would be used at the base, and GFRC (Glass Fibre Reinforced Concrete) cladding with granite accents, aluminum framed windows and decorative grilles would be used at the upper levels. The selection of materials and design is intended to relate in proportion, rhythm, level of detail and color to the existing facades of the Pacific Building. The project architect has described the style of proposed Pacific II and III facades as "classically inspired modernist."

Construction of the Pacific III portion of the project would be the most noticeable aspect of the project in terms of urban design and visual quality (see Figures 17-19, pages 72 to 74). Pacific III would be visible to pedestrians along Jessie Street, to occupants of neighboring buildings along Jessie Street and Fourth Street, and to some street-level vantages along Fourth Street. The eight-story Victorian Hotel, however, would block most westerly views of proposed Pacific III, and the eight-story Downtown Community College Center building, at the northwest corner of Fourth and Mission Streets,

Pacific Center
Photomontage from Jessie Street Looking North

Figure 17



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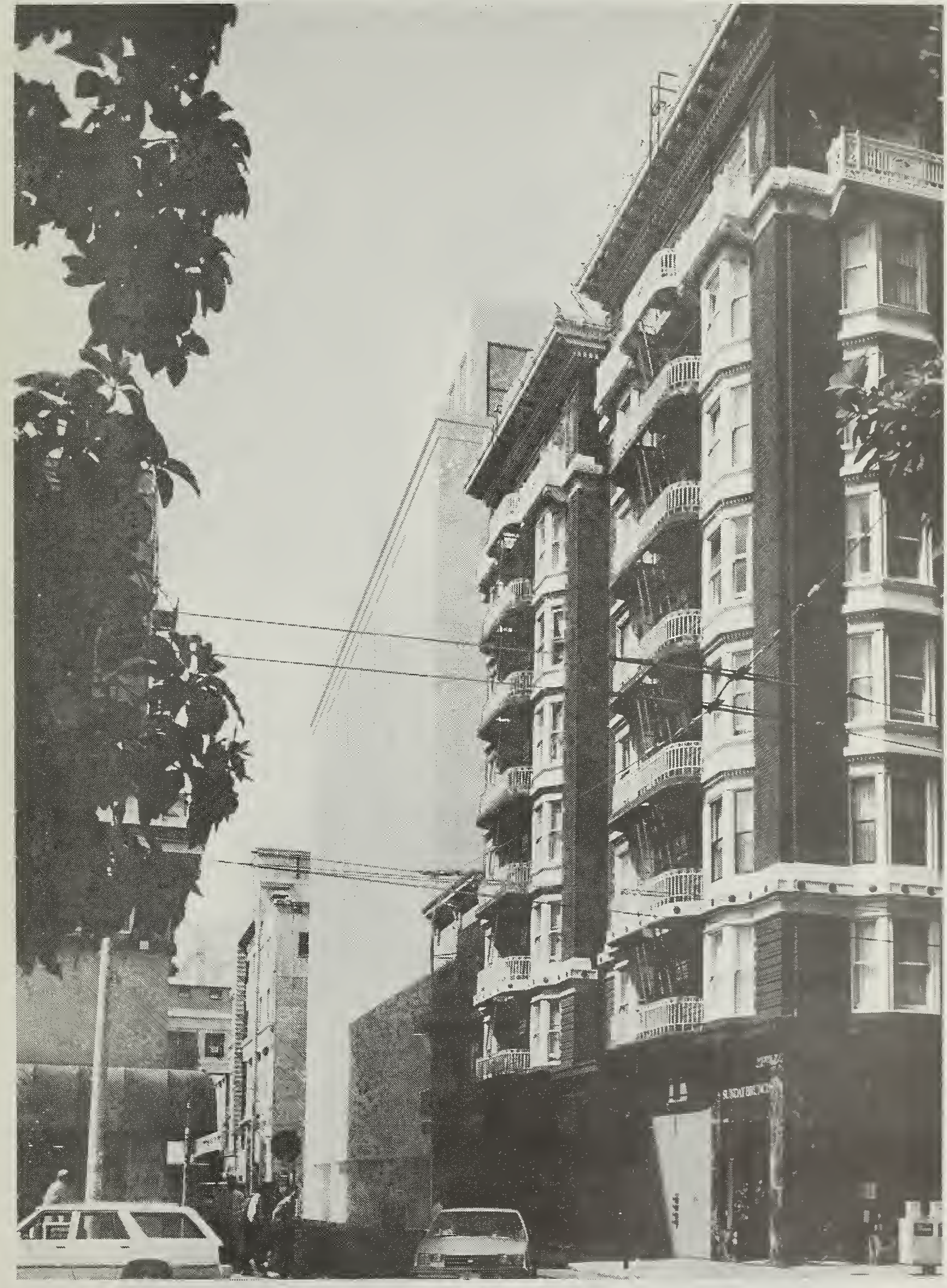
SOURCE: SQAURE ONE FILM + VIDEO

Pacific Center
Photomontage from Fourth Street Looking West

Figure 18



SOURCE: SQUARE ONE FILM + VIDEO

recycled paper

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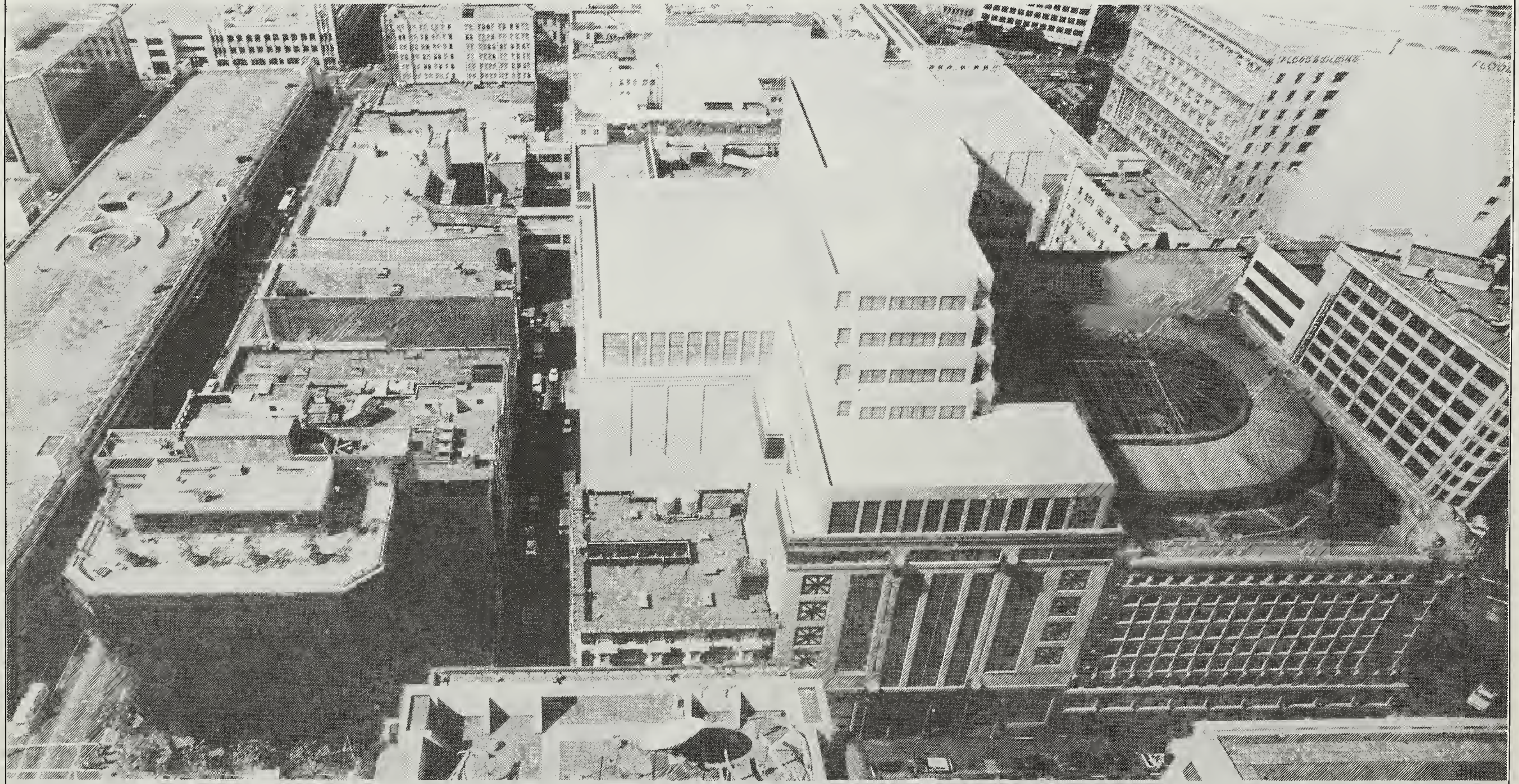
Pacific Center
Photomontage from Marriott Hotel Looking West

Figure 19



SOURCE: SQAURE ONE FILM + VIDEO

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would block most northerly views of proposed Pacific III. Pacific II would block southerly views of the proposed Pacific III. The Pacific III portion of the project would result in a more confined feeling for pedestrians at the eastern end of Jessie Street.

C. SHADOW, WIND AND TELEVISION RECEPTION

SHADOW

Open space in the project vicinity includes Union Square (the block bounded by Geary, Powell, Stockton and Post Streets), Hallidie Plaza and the Powell Street Cable Car Turnaround (on the north side of Market Street where Powell and Eddy Street converge), the ANA Hotel ground and terrace areas (on the west side of Third Street between Market and Mission Streets), and the future Yerba Buena Gardens Esplanade (on the eastern two-thirds of central block 2, bounded by Fourth, Third, Mission and Howard Streets). The proposed project would also have an open space area of approximately 7,585 sq. ft. located on the rooftop of Pacific I, partially surrounding the skylight of the atrium (see Figures 7 and 24, respectively pages 31 and 83).

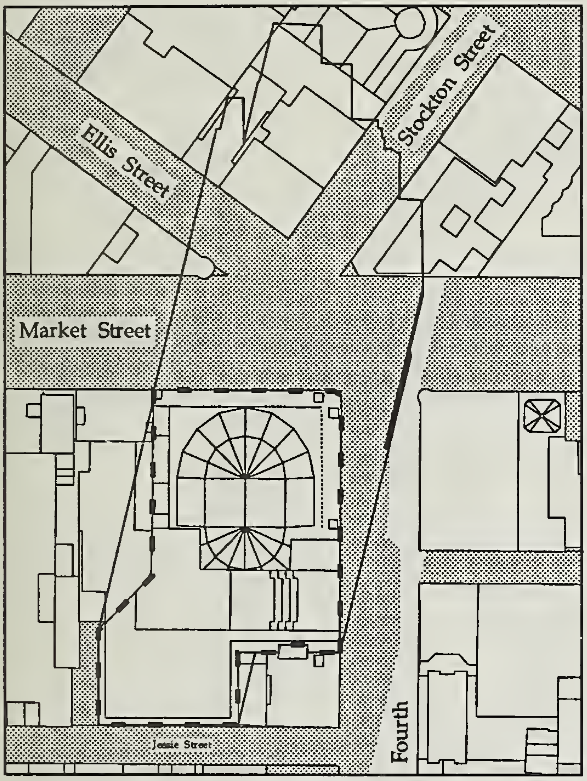
Shadow patterns for existing buildings in the project area (including Pacific I and II) and the proposed Pacific III are shown for 10:00 a.m., noon and 3:00 p.m. for the four seasons: during winter and summer solstices when the sun is at its lowest and highest, and during the spring and fall equinoxes when the sun is at its midpoint. Figures 20-23 show existing and net new shadow due to the project. Conditions from June 21st through December 21st closely mirror the conditions from December 21st through June 21st (using solar time). The analysis includes shadows cast on streets, sidewalks, pedestrian areas, and open spaces in the area currently affected by the existing Pacific I and II buildings, and potentially affected by the proposed Pacific III building. A shadow outline of the project as though cast on the ground without intervening buildings, is shown to illustrate the scale of the project shadow in relation to the shadows cast by structures that would surround it.

December 21 (PST)

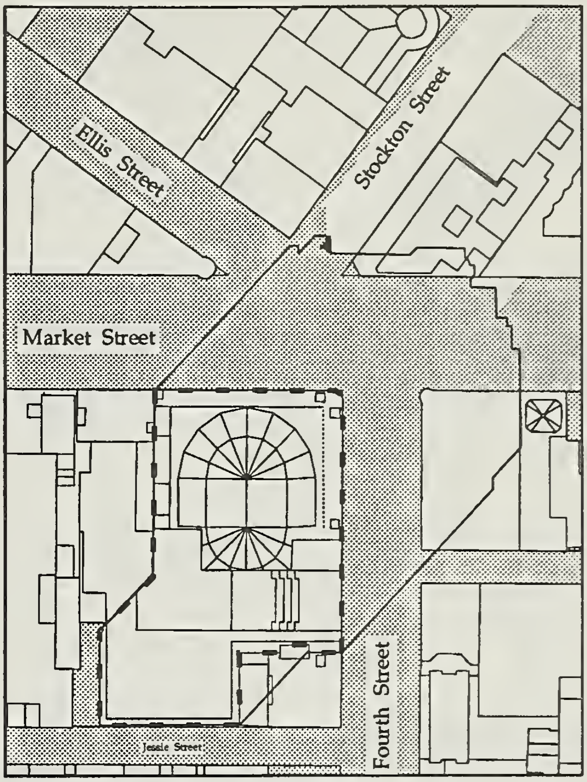
At 10:00 a.m. Pacific Standard Time (PST) (see Figure 20, page 77), the project would add new shadow to a narrow strip of about 170 linear feet to the Fourth and Market intersection. At noon, the project would add about 140 square feet of shadow to the northern portion of the Ellis/Stockton/Market intersection. At 3:00 p.m. the project would add new shadow to about 85 linear ft. of Fourth Street perpendicular to the Pacific II entry (about 1,395 sq. ft.), including the sidewalks. Throughout the day on December 21st, the project and/or surrounding buildings would shade between 95 and 100 percent of the Pacific I rooftop open space area.

Pacific Center
Project Shadow Patterns
December 21

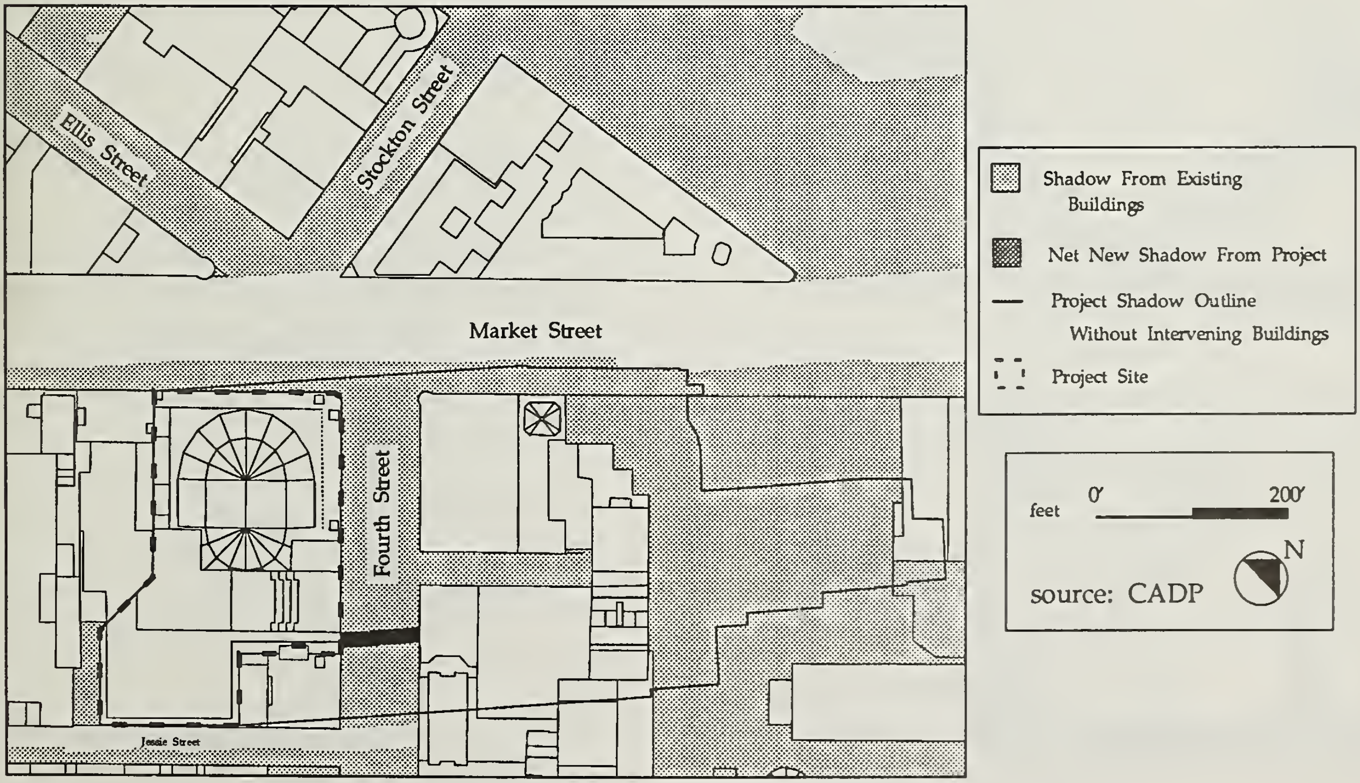
Figure 20



10:00 a.m., PST



noon, PST

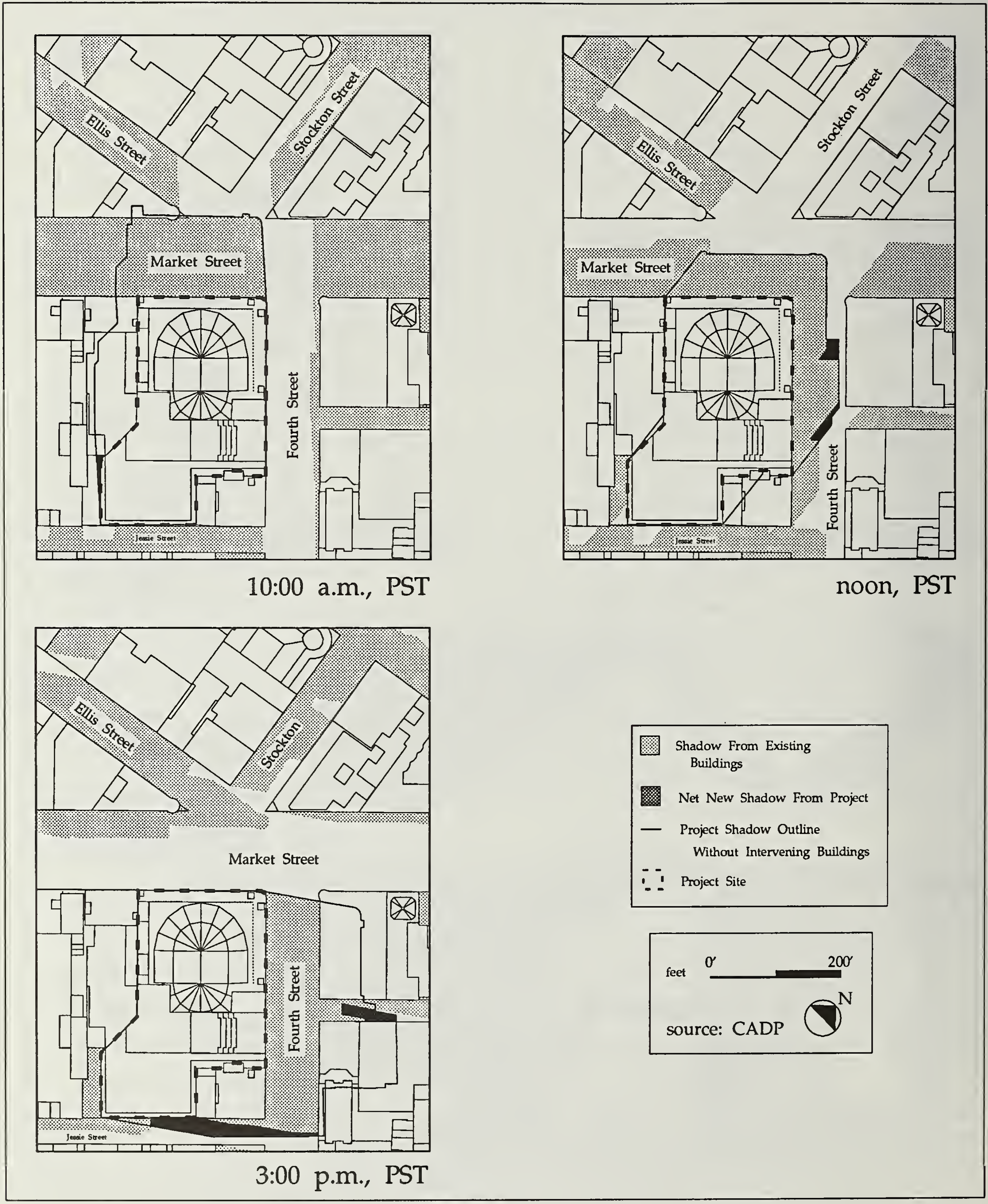


Ellis Street
Stockton Street
Market Street
Fourth Street
Jessie Street
Shadow From Existing Buildings
Net New Shadow From Project
Project Shadow Outline Without Intervening Buildings
Project Site
feet
0'
200'
N
source: CADP

3:00 p.m., PST

Pacific Center
Project Shadow Patterns
March 21

Figure 21



10:00 a.m., PST

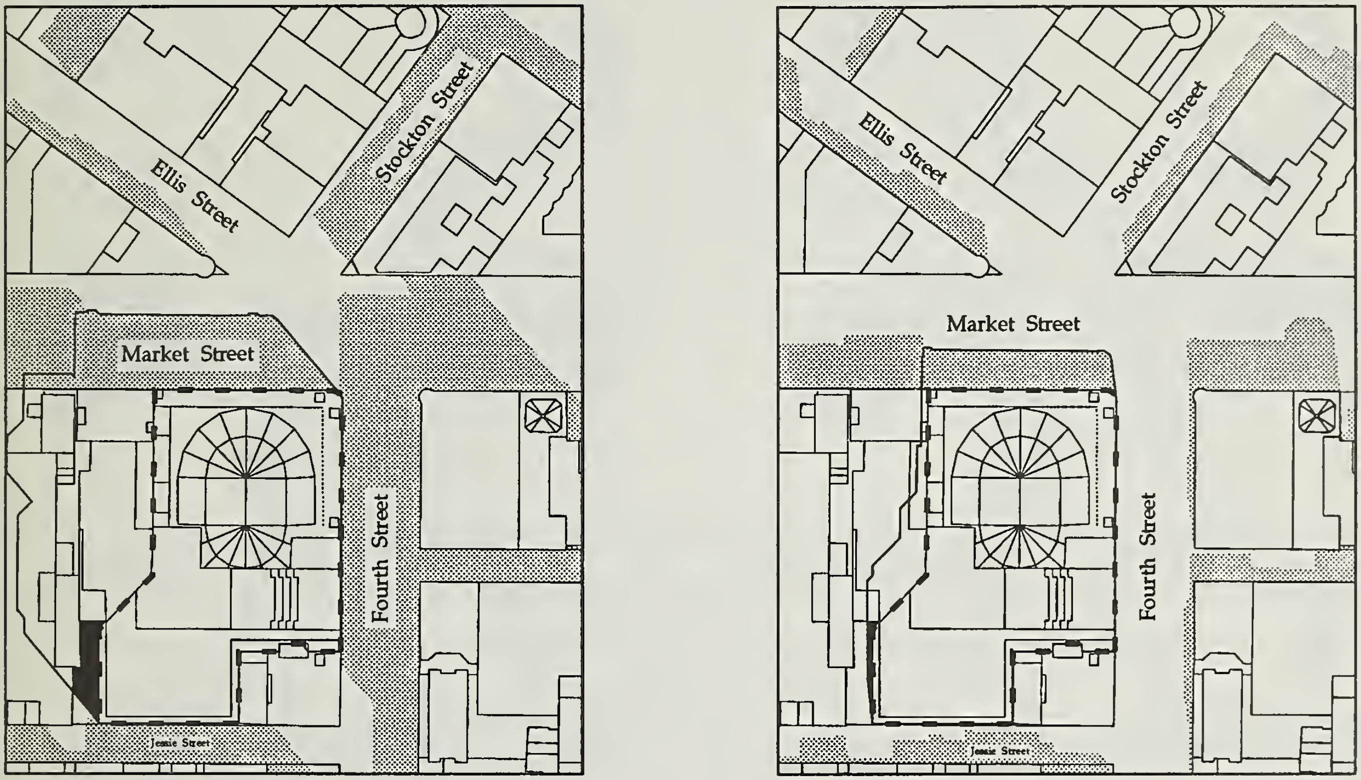
noon, PST

3:00 p.m., PST

Ellis Street
Stockton Street
Market Street
Fourth Street
Jessie Street
Stockton
Shadow From Existing Buildings
Net New Shadow From Project
Project Shadow Outline Without Intervening Buildings
Project Site
feet
0′
200′
N
source: CADP

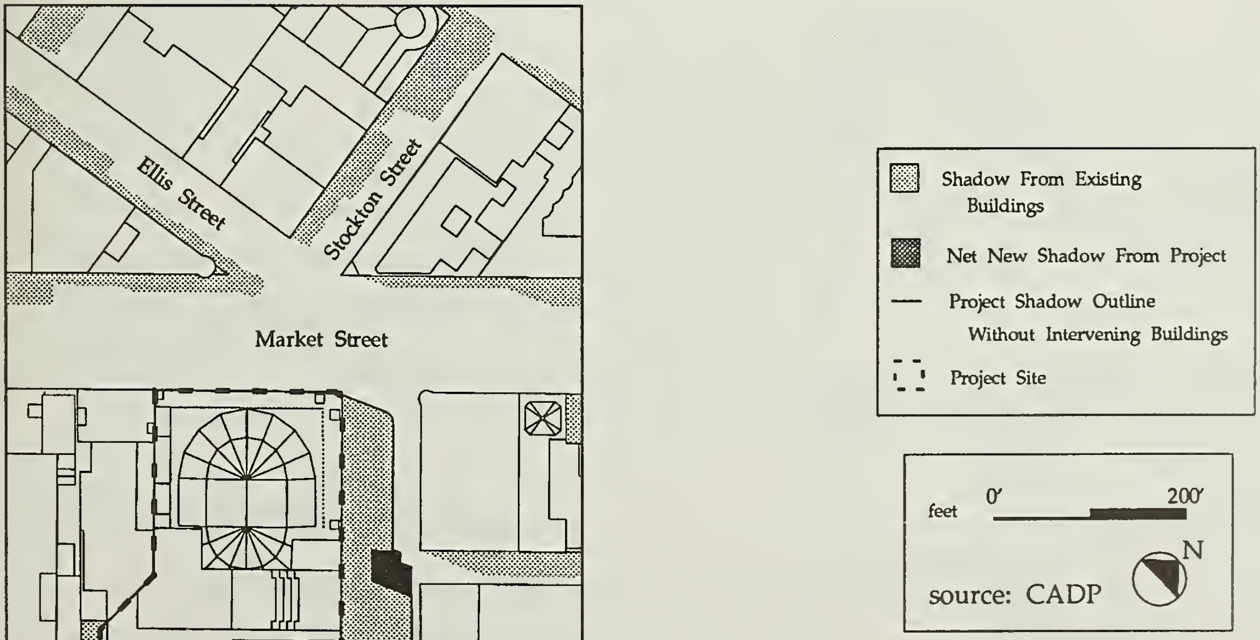
Pacific Center
Project Shadow Patterns
June 21

Figure 22



10:00 a.m., PDT

noon, PDT

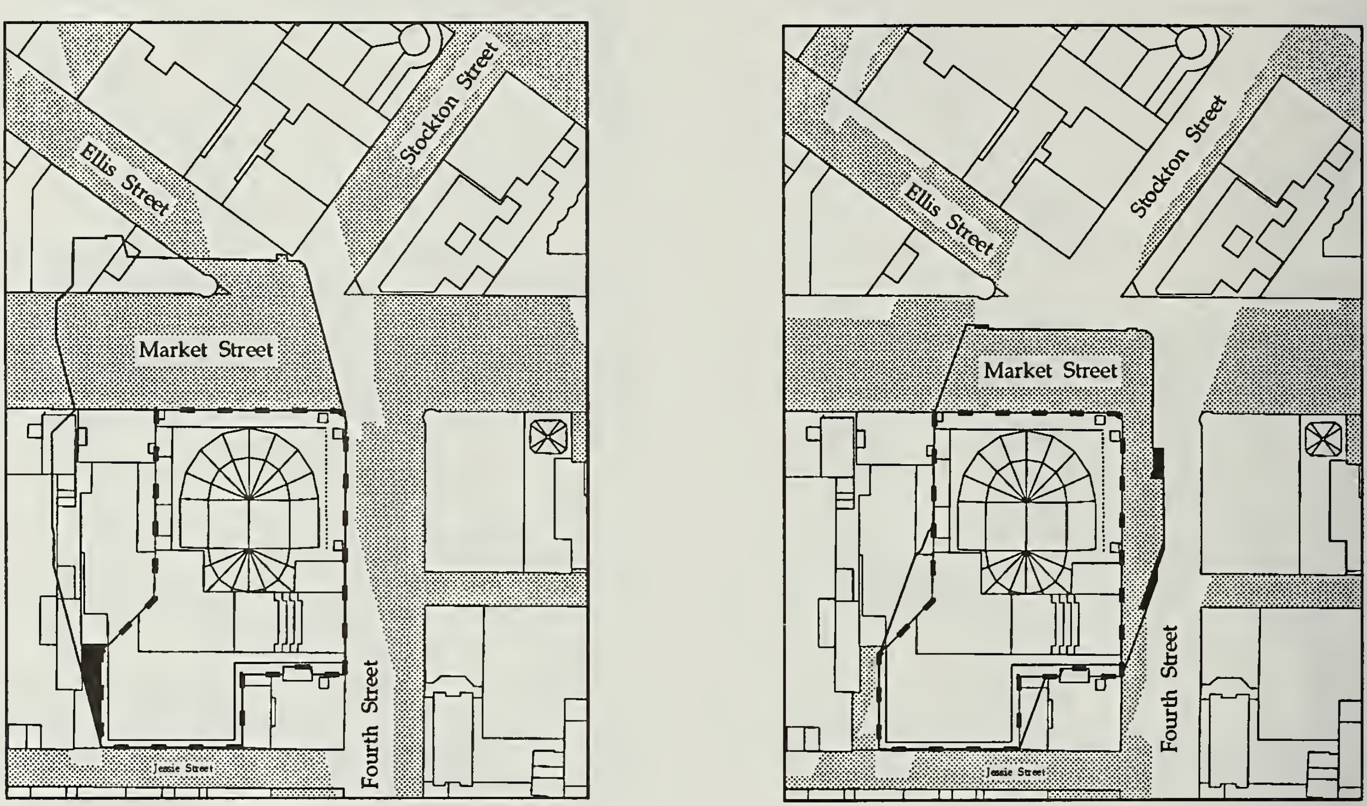

Ellis Street
Stockton Street
Market Street
Fourth
Jessie Street
▨ Shadow From Existing Buildings
■ Net New Shadow From Project
— Project Shadow Outline Without Intervening Buildings
▭ Project Site
feet
0'
200'
N

source: CADP

3:00 p.m., PDT

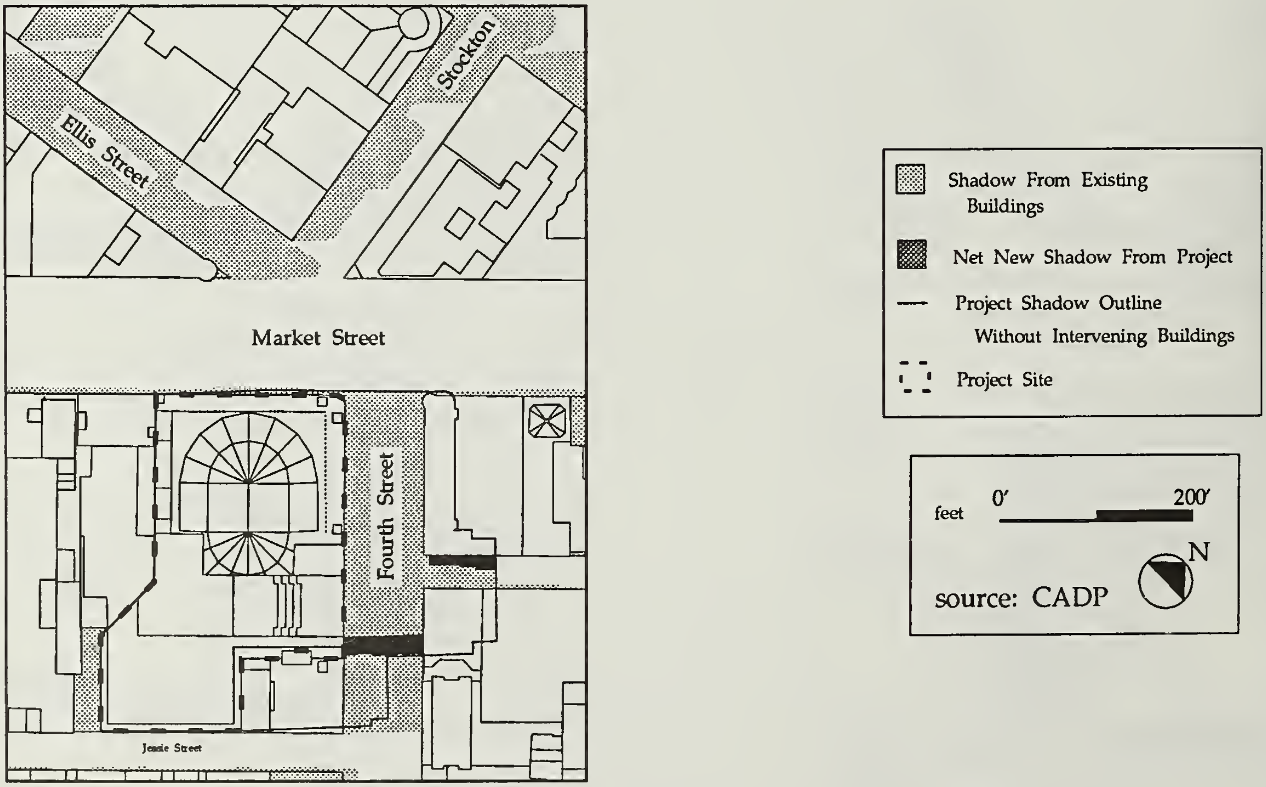
Pacific Center
Project Shadow Patterns
September 21

Figure 23



10:00 a.m., PDT

noon, PDT


Ellis Street
Stockton
Market Street
Fourth Street
Jessie Street
Shadow From Existing Buildings
Net New Shadow From Project
Project Shadow Outline Without Intervening Buildings
Project Site
feet
0′
200′
N
source: CADP

3:00 p.m., PDT

March 21 (PST)

At 10:00 a.m. PST (see Figure 21, page 78), the project would not add new shadow to any street, sidewalk, pedestrian area or open space location. At noon the project would add new shadow to two small patches within Fourth Street between Jessie and Market Streets, not including sidewalks. At 3:00 p.m. the project would add new shadow to about 210 linear ft. of Jessie Street extending into Fourth Street, including a portion of the north Jessie Street sidewalk, and about 80 linear ft. of new shadow to Stevenson Street, across Fourth Street. Throughout the day on March 21st, the project and/or surrounding buildings would shade between 50 to 70 percent of the Pacific I rooftop open space area.

June 21 (PDT)

At 10:00 a.m. and noon Pacific Daylight Time (PDT) (see Figure 22, page 79), the project would add new shadow to a parking and service area between Pacific III and the adjacent Emporium Store building; no sidewalks would be affected. At 3:00 p.m. the project would add new shadow to about 165 linear ft. including a portion of the north Jessie Street sidewalk adjacent to Pacific III, and to two small patches within Fourth Street. Throughout the day on June 21st, the project and/or surrounding buildings would shade between 20 to 40 percent of the Pacific I rooftop open space area.

September 21 (PDT)

At 10:00 a.m. PDT (see Figure 23, page 80), the project would add new shadow to a parking and service area between Pacific III and the Emporium Store building. At noon the project would add new shadow to two small patches within Fourth Street; no sidewalks would be affected. At 3:00 p.m. the project would add new shadow to about 85 ft. of Fourth Street perpendicular to the Pacific II entry (about 1,720 sq. ft.), including the sidewalks, and to about 70 ft. of Stevenson Street, across Fourth Street. Throughout the day on September 21st, the project and/or surrounding buildings would shade between 45 to 70 percent of the Pacific I rooftop open space area.

The Sunlight Ordinance (Proposition K)

In June 1984, the voters of the City and County of San Francisco approved Proposition K, the Sunlight Ordinance (*City Planning Code* Section 295) prohibiting the issuance of building permits for structures that would shade property under the jurisdiction of, or designated to be acquired by, the Recreation and Parks Commission unless the City Planning Commission determines that such shade would have an insignificant adverse impact on the use of such property. The nearest open spaces protected by Proposition K in the vicinity of the project are Union Square to the north and Langsten Park and Alfred Bodecker Park to the northwest.

In February 1989, the City Planning and Recreation and Parks Commissions adopted shadow criteria for all 15 parks in the greater downtown area. The districts within the greater downtown area have the greatest potential for new shadow on parks because of the permitted height limits. The commissions: 1) set an Absolute Cumulative Limit for new shadow for each open space; 2) (where new shadow is allowable): projected individual building impacts and allocated a portion of the additional allowable shadow among specific projects, within the Absolute Cumulative Limit; and 3) set forth qualitative criteria for new shadow. A shadow fan is presented to illustrate the scale of the project shadow as though cast on the ground without existing intervening buildings (see Figure 24, page 83). The project would add no new shadow to any property under the jurisdiction of, or designated for acquisition by, the Recreation and Park Commission, during the hours specified by Proposition K (one hour after sunrise to one hour before sunset at any time of the year).

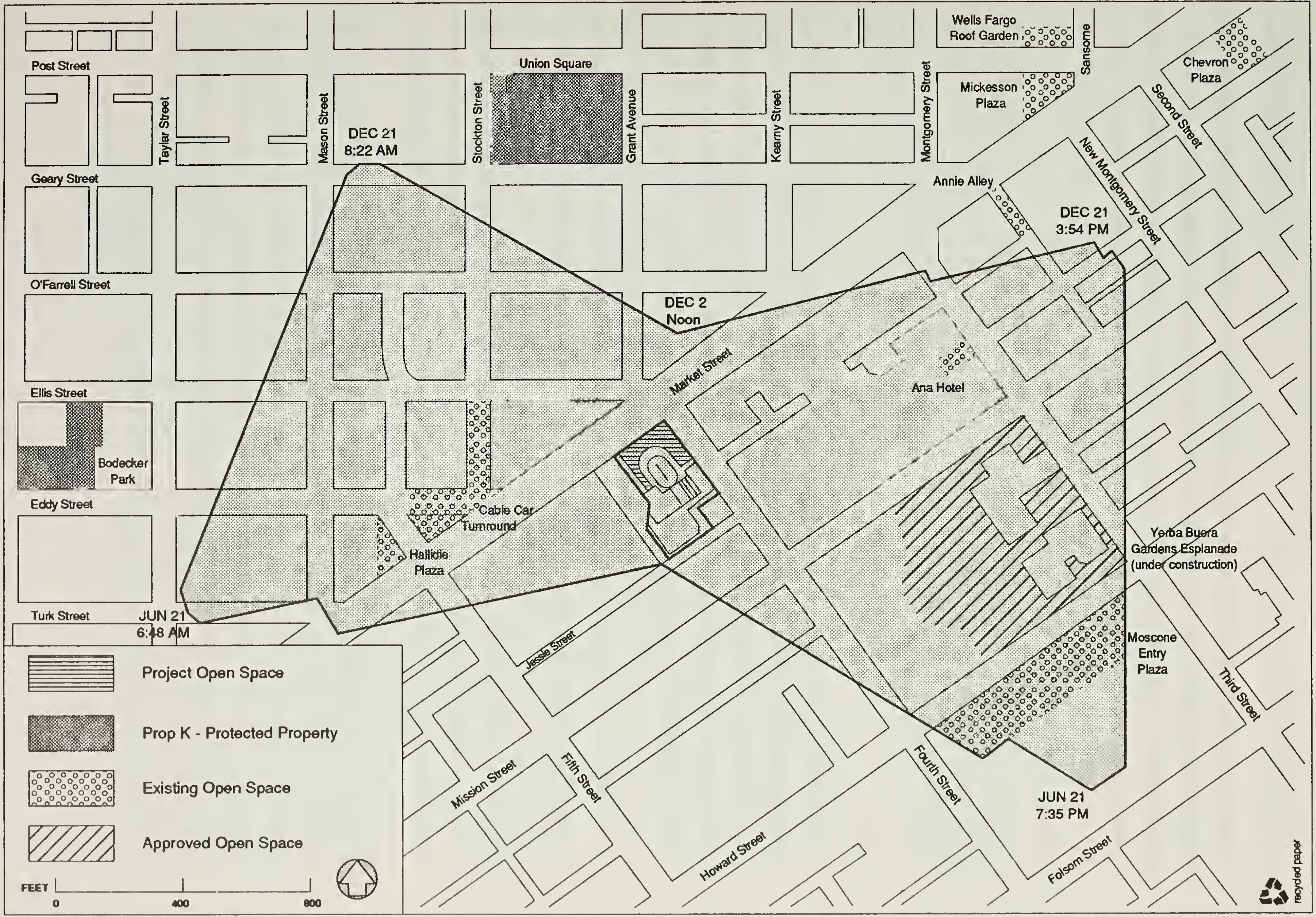
As can be seen from the shadow diagrams in Figures 20 through 23, the net new shadow that would be cast from the proposed project is relatively minor. This is primarily due to the fact that the new components of the proposed project (*i.e.*, Pacific III, and dome atop Pacific I) are generally surrounded by existing larger structures to the north, east and west. Accordingly, any new shadow from the proposed project that could be cast on surrounding private, but publicly-accessible open space (see Figure 24) would also be minimal.

Sunlight Access to Public Streets

The *City Planning Code* (Section 146(a)) includes sun access criteria to allow direct sunlight to reach sidewalk areas of designated streets during critical hours of the day. In the case of sidewalks, the critical hours are considered to be the hours around noon. Streets in the vicinity of the project identified in Section 146(a) for sunlight access protection include the south side of Market Street from Tenth to Second Streets, the east and west sides of Stockton and Grant Streets between Market and Bush Streets, and the west side of New Montgomery Street between Market and Howard Streets. The proposed project would not cause shadows affecting any sidewalks identified in Section 146(a).

Pacific Center
Year-Round Shadow Trace

Figure 24



SOURCES: DEPARTMENT OF PLANNING; EIP ASSOCIATES

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Treating the entire site as if it were one lot fronting on Market Street, the project would comply with Section 146 requirements of a maximum street wall height of 119 feet (Pacific I is 110 feet) and a sun access angle of 50°. However, for a brief period in Winter, the project could add a small amount of new shadow to the Stockton Street sidewalk (see Figure 20, above, diagram at noon).

Sunlight Access to the Victorian Hotel

Sunlight access to the west side of the Victorian Hotel would be substantially reduced as a result of the proposed project. The Pacific III portion of the project would block mid- and late-afternoon sunlight access to portions of the Victorian Hotel's west facade throughout the year.

WIND[1]

The *City Planning Code* Section 148, Reduction of Ground-Level Wind Currents in C-3 (Downtown Commercial) Districts, requires buildings to be shaped so as not to cause ground-level wind currents to exceed, more than ten percent of the time, 11 miles per hour (mph) in substantial pedestrian use areas, and seven mph in public seating areas. Similarly, the *City Planning Code* requires that buildings not cause equivalent wind speeds to reach or exceed the hazard level of 26 mph for a single full hour of the year. The seven mph and 11 mph comfort criteria are based on wind speeds that are measured for one minute and averaged. In contrast, the 26 mph hazard criterion is based on wind speeds that are measured for one hour and averaged; this is equivalent to a one minute average of 36 mph.

Analysis of the potential wind effects of the proposed project is based on two sources: limited wind tunnel tests (Pacific I and II portions of the site); and information gathered in 1980 for an environmental impact report of an earlier proposal at the site (Pacific III portion of the site).[1]

In 1981, the City Planning Commission certified the Pacific III Apparel Mart Building Final EIR (Case No. EE 80.315), which evaluated, among other things, the potential wind effects of a 30-story tower at the Pacific III location of the site (the project evaluated in that EIR was begun, but not completed). The EIR determined that no adverse affects on pedestrian comfort would occur as a result of the proposed development, due to intervening structures and the building's orientation and massing.[2] The current proposal for the Pacific III portion of the site, a ten-story tower, would also not be expected to adversely affect pedestrian comfort for the same reasons.[1]

Prevailing winds in San Francisco are from the northwest, west-northwest, west, and west-southwest. Using a wind tunnel and a scale model of the downtown San Francisco area surrounding the project site, wind speed measurements were made at 11 surface locations adjacent to the Pacific I and II portions of the site. The wind tunnel analysis included two configurations: the existing setting (including the existing Pacific I and II structures) and the existing setting plus the modifications of the Pacific I and II portions of the project. (The proposed project would reconfigure the street-level entrance to Pacific I, at the southwest corner of Market and Fourth Streets, thereby modifying wind patterns along Market and Fourth Streets. Ground-level exterior modifications to the Pacific II building would be minor, and would not affect wind conditions.) The study included separate tests for all of San Francisco's four major prevailing wind directions. Existing conditions included approved and under-construction projects in the vicinity.

Wind test data were combined with wind records to predict the wind speed that would be exceeded ten percent of the time, and one hour per year, at each of the 11 locations tested. The predicted winds were then compared to the comfort and hazard criteria of the *San Francisco Planning Code*, established in the *Downtown Plan*. Throughout the following discussion, the wind speeds reported refer to the equivalent wind speeds that would be exceeded ten percent of the time, or one hour per year when referring to the hazard criterion.[3]

The location of the measurement points and the results of the wind-tunnel study for compliance with the comfort criteria are summarized in Appendix F, Figure F-1. The pedestrian comfort criterion speed of 11 mph applies to all test locations.

Existing Conditions

Wind speeds in the existing setting range from nine to 13 mph at the 11 locations tested. The comfort criterion for pedestrians is currently exceeded at five test locations by one to two mph.

Project

Wind speeds in the existing setting plus the project would range from nine to 13 mph at the 11 locations tested. The project would cause winds to decrease at three of the 11 locations, be unchanged at three locations, and increase at five locations tested. The comfort criterion for pedestrians would continue to be exceeded at five test locations by one to two mph. The hazard criterion would not be violated at any of test locations with the project in place. The general conclusions of the meteorologist were that the overall street level wind environment would remain unchanged and that the proposed project would not adversely affect the wind environment within pedestrian areas adjacent to the site.[1]

TELEVISION RECEPTION

An Initial Study of the proposed project was published on February 27, 1992, and it was determined that an EIR would be required for the project (see Appendix A, page A-1, which contains the full text of the Initial Study). Issues determined to require no further discussion as a result of the Initial Study included land use and zoning, glare impacts on other properties, population and housing, operational noise, construction air quality, biology, geology/topography, water, energy/natural resources, hazards, cultural resources and utilities and public services. During preparation of the Draft EIR, however, the owners of the Victorian Hotel, adjacent to the project site, expressed concern about the effects of the proposed project on their television reception (the Victorian Hotel does not have a cable television service subscription). Therefore, a discussion of this topic, normally included under utilities and public services, is included here.

When a television program is broadcast, the varying electrical signals are amplified and used to modulate a carrier wave; the modulated wave is usually fed to an antenna, where it is converted to electromagnetic waves and broadcast over a large region. The waves are sensed by antennas connected to television receivers, and the image is reconstructed. Alternatively, television signals can be transmitted via coaxial cable networks to paying subscribers, rather than through the airwaves.

The General Manager of Sutro Tower Communications was contacted to discuss the potential effects of the proposed project on the Victorian Hotel's television reception.[4] The primary concern is that the Pacific III portion of the proposed project would introduce a ten-story tower in the direct "line of sight" of the Victorian Hotel and Sutro Tower, and thereby diminish the strength of signal reception.

In particularly congested areas, such as downtown San Francisco, television signals often bounce off building surfaces before being received, and direct line of sight to Sutro Tower is not essential. Another factor contributing to changes in television reception is the relative height of existing and proposed structures (e.g., a 30-story tower could have a greater negative effect on an 8-story building than would a ten-story building in the same location). The Pacific III portion of the project would be approximately 150 ft. in height, approximately 65 feet taller than the Victorian Hotel.

Although difficult to predict with certainty the project's potential effects on television reception at the Victorian Hotel, some reduction in signal strength could occur as a result of the proposed project. Such impacts could be mitigated either by installation of a taller, stronger antenna, or through the establishment of cable service to the Victorian Hotel. The project sponsor has agreed to provide an acceptable level of remediation, as necessary.

The project sponsor would pay for the installation of new television antennae at the adjacent Victorian Hotel, or for the installation of and subscription to cable television service at the hotel, if it is determined that construction of the proposed project has a demonstrable and negative impacts on television reception at the Victorian Hotel.

Prior to and following construction of Pacific III, television signal strength will be measured at the rooftop of the Victorian Hotel. These measurements will be conducted by an independent party, using a directional antenna or other similar device. The results of these tests will be submitted to the Department of City Planning staff for their review and appropriate action.

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1. This section is based on *Wind Impact Evaluation of the Proposed Pacific III Tower and Pacific Center Projects, San Francisco*, February 4, 1992, prepared by Donald Ballanti, certified consulting meteorologist, for EIP Associates. The full text of this report, including the November 4, 1980 letter concerning the Pacific III portion of the site, is contained in Appendix F of this EIR.

2. Ground-level wind accelerations near buildings are controlled by exposure, massing and orientation. Exposure is a measure of the extent that a building extends above surrounding structures into the wind stream. A building that is surrounded by taller structures is not likely to cause adverse wind accelerations at ground level, while even a small building can cause adverse wind acceleration effects if it is free-standing and exposed. Building massing and orientation controls the amount of wind intercepted by a structure and whether building-generated wind acceleration occurs at or above ground level.

3. Equivalent wind speed is an hourly wind speed adjusted to incorporate the effects of gustiness or turbulence on pedestrians.

4. Telephone conversation, Gene Zastrow, General Manager, Sutro Tower Communications, July 14, 1992.

D. TRANSPORTATION

CUMULATIVE CONTEXT

Introduction

The transportation sections of the *Mission Bay* and *South of Market Area Plan EIRs* address various regional transportation impacts in 2000 (the *Mission Bay EIR* also analyzes transportation impacts in 2020). The Mission Bay transportation impact analyses evaluate travel generated by Mission Bay in the context of growth in travel projected for the rest of the City and Bay Area. The South of Market analyses do the same for that area. It is growth in the City and region that would result in the greatest impact on most of the transportation system studied.

Using slightly different analysis methodologies, the two EIRs employ the same basic screenline approach to study regional transportation impacts of San Francisco employment growth. Results differ somewhat, based on the differences in forecasting techniques, but generally by less than five to ten percent; this difference is well within the range of accuracy of ten year forecasts. Therefore, the two sets of results are compatible. This summary of cumulative transportation effects will report largely from the *Mission Bay EIR*, with *South of Market EIR* results included where there is notable relevant information.

In summary, both EIRs show that by 2000, congested highway conditions would result in a shift from autos to higher use of transit and ridesharing by travelers to and from the Downtown & Vicinity, which includes the project site. The East Bay would be the most congested corridor, the Peninsula would be the least. By 2020, travel demand would exceed the capacity of regional transportation systems. To serve regional growth, expanded transit and freeway systems would be required.

The proposed project is expected to be completed, occupied and the amount of net new space attributable to the project absorbed by 2000. Therefore, the impacts of the project and its contribution to cumulative transportation impacts would occur primarily in the 1995-2000 context. The information from the *Mission Bay EIR* for 2020 was prepared for the purposes of analyzing full buildout impacts of Mission Bay in a proper cumulative context, and is more speculative and subject to change. It is presented for the reader's information.

The Analysis Years

The *Mission Bay EIR* analysis includes studies of transportation conditions in the year 2000, and, in order to account for buildout of the Mission Bay planning area, in the year 2020. Analyses for the 1985-2000 timeframe can rely on reasonably confident estimates of regional transportation capacity improvements as defined by the regional agencies' highway and transit planners. There are no regional transportation plans or policies for 2020. Therefore, the *Mission Bay EIR* uses a different approach for this longer-term analysis. For the 2020 analysis, rather than reporting the impacts of future travel on transportation systems as is the analytical approach for 2000, the estimates of 2020 travel conditions use the transportation system capacities developed for 2000 as a base and identify the types of transportation improvements likely to be necessary to serve growth in travel between 2000 and 2020.

Effects Of The Loma Prieta Earthquake

While many of the downtown streets and intersections have experienced changes in traffic volumes as a result of closure of damaged freeway segments, most of them are expected to be only temporary. As freeway repairs are completed, traffic is expected to return to its pre-quake patterns. Although not all repair plans have been finalized, it has been necessary to make certain assumptions about the transportation system that would be in place by the year 2000 to provide a reasonable assessment of future conditions. The following two future scenarios were the basis for the transportation analysis:

> Freeway Down Scenario A. The Embarcadero Freeway (and the Washington and Clay Street ramps) have been demolished and are assumed to be replaced with a surface roadway. This roadway would be readily accessible from intersection streets, similar to what will occur once street repairs following freeway demolition are completed, and all roadway obstructions removed. Given this level of access, this surface roadway scenario would provide substantially less travel capacity than that of the elevated freeway. The Mission Street/Main Street and Mission Street/Beale Street ramps, or a comparable facility, may or may not be restored at its pre-earthquake location. The section of I-280 between the U.S. 101 interchange and Army Street are assumed to be repaired or replaced with facilities of comparable capacity. U.S. 101 ramps at Turk Street and Golden Gate Avenue have also been demolished. While no definitive replacement facility, if any, has been selected, the effects of this demolition are expected to be limited to some alteration of local traffic patterns in the general vicinity of Market Street and South Van Ness Avenue and the Civic Center.

The primary effect of this scenario would be that traffic patterns of San Francisco's local street system that served the Embarcadero Freeway operate and would operate differently in the future than before the earthquake; cumulative travel impacts as they would affect the regional highway screenlines reported in the *Mission Bay* and *South of Market EIRs* analyses may be the same or possibly lower to the extent access to freeway screenlines is delayed by longer travel times associated with surface street travel. Therefore, the "Regional Travel" discussion below regarding impacts on highways would still be applicable, if not an overstatement of cumulative impacts on the regional highway system serving San Francisco.[1]

Freeway Down Scenario B - Limited Access. This scenario also makes assumptions regarding the replacement of the demolished Embarcadero Freeway and the Washington and Clay Street ramps. This scenario is reflective of the type of travel thoroughfare forwarded for further study by former Mayor Agnos. This replacement roadway may or may not include subterranean segments, but may have more limited access (i.e., fewer access points to The Embarcadero) than the Freeway Down Scenario A surface roadway described in the preceding paragraphs. The result of this limited access would be that the roadway would have a higher travel capacity (because there would be fewer access points to impede through traffic) than the Freeway Down Scenario A; capacity of this limited access scenario, however, may still be somewhat lower than that formerly provided by the elevated Embarcadero Freeway. The Mission Street/Main Street and Mission Street/Beale Street ramps may or may not be restored at their pre-earthquake location. The section of I-280 between the U.S. 101 interchange and Army Street are assumed to be repaired or replaced with facilities of comparable capacity. U.S. 101 ramps at Turk Street and Golden Gate Avenue have also been demolished. While no definitive replacement facility, if any, has been selected, the effects of this demolition are expected to be limited to some alteration of local traffic patterns in the general vicinity of Market Street and South Van Ness Avenue and the Civic Center.

Because it is assumed the travel capacity of this replacement scenario would approach that formerly provided by the Embarcadero Freeway, future travel conditions at the highway and transit screenlines reported in the *Mission Bay* and *South of Market EIR* analyses would continue to be applicable for describing cumulative impacts.

Regional Travel

Regional travel was analyzed for each of the three major approaches to San Francisco: the North Bay via the Golden Gate Bridge; the East Bay via the San Francisco-Oakland Bay Bridge; and the Peninsula via the U.S. 101 and I-280 freeways.

The regional travel forecasts assume that where severe congestion is projected for the highway system and where parallel transit and ridesharing systems are available, travelers would choose to shift from their autos to fill the capacity available in transit and ridesharing systems. Those shifts are assumed to be made by travelers from the Downtown & Vicinity only, because they would have more transit and ridesharing options than travelers from other parts of the City or region. The shift to transit and ridesharing would be greatest for travel to the East Bay, somewhat less to the North Bay, and none would be expected for travelers to the Peninsula by 2000. (*Mission Bay EIR*, Vol. II, pp. VI.E.76-79; *South of Market Plan EIR*, pp. 109-112, C-38-40).

Growth in the entire Downtown & Vicinity, including the South of Market and Mission Bay, and the rest of the region would be the primary source of travelers trying to cross the Golden Gate and Bay Bridges, and to use the U.S. 101 and I-280 freeways at peak hours. (*Mission Bay EIR*, Vol. II, pp. VI.E.71-83; *South of Market EIR*, pp. C-46-47.)

North Bay Corridor

The *Mission Bay* and *South of Market EIRs* found that the Golden Gate Bridge and its approaches operated with moderate congestion (driving speeds of about 35 to 45 mph) in peak hours in 1985. By 2000, heavy congestion on the bridge (a driving speed of about 30 mph) would last about two hours during the p.m. commute period if additional transit capacity between downtown and the North Bay were provided, and a substantial shift from autos to transit and ridesharing were made by travelers from the Downtown & Vicinity. If no shift from 1985 transit use levels were to occur, the period of heavy congestion on the Bridge would last for about four hours in 2000.

Golden Gate Transit indicates that it would be able to increase its bus and ferry capacity between downtown and the North Bay by 2000 in response to the demand generated. Golden Gate Bus ridership would almost double, with projected Levels of Service (LOS) of D during the P.M. peak hour and LOS C during the P.M. peak period. Golden Gate ferry ridership would grow by about 60 percent from 1985 to 2000 and operate at LOS B during the P.M. peak hour and period. Ridesharing is projected to increase by 7 percent to 15 percent between 1985 and 2000 in the North Bay.

By the year 2020, heavy congestion on the Golden Gate Bridge could last about four hours, assuming the levels of transit and ridesharing used in 2000, if there were no additional transportation improvements between 2000 and 2020. The *Mission Bay EIR* indicates that, by that time, the need to consider major new transportation infrastructure and transit systems will have become apparent. The *Mission Bay EIR* provides examples to illustrate the magnitude of improvements that could be necessary; those mitigation measures therefore are not prescriptive, but indicative of the level of investment required to respond to future travel demand, which would require in-depth review and analysis in the next phase of regional transportation planning. Those mitigation measures include adding a second deck to the Golden Gate Bridge to provide transbay capacity for new bus and carpool lanes, or a light-rail line, either of which would extend between downtown San Francisco and Sonoma County. (*Mission Bay EIR*, Vol. II, pp. VI.E.31-34, 39, 41, 71-92, 94-125, 129-134, 214-215, and 225-226; *South of Market Plan EIR* pp. 98-105, and 111-124.)

East Bay Corridor

There currently is virtually no room for additional vehicle traffic on the eastbound Bay Bridge approaches between 4:00 p.m. and 6:00 p.m. While the growth in travel demand on the Bay Bridge from the Downtown & Vicinity could be served by shifting those commuters from autos to transit and increased ridesharing, trips to or from other areas of the region generally are not well served by transit and would continue to be made primarily in private vehicles.

Even with the substantial shift to transit and ridesharing assumed in the analysis for travelers from the Downtown & Vicinity, the Bay Bridge would operate at capacity for about 4.5 hours in 2000, resulting in severe congestion on the San Francisco approaches to the bridge, travel speeds of less than 30 miles per hour, and heavy congestion on the bridge itself every weekday afternoon. Were the shift to transit and ridesharing from 1985 levels not to occur, the period of severe congestion in 2000 would extend for more than 5.5 hours.

By 2000, the numbers and proportion of commuters from the Downtown & Vicinity on BART during the p.m. peak period would be substantially higher. The number of trips on AC Transit would increase by about 65 percent based on the service available and the need to accommodate some riders that would otherwise use BART if ridership conditions were less crowded by 2000.

The ratio of passengers to seats on BART would increase from 1.30 in 1985 to 1.63 in 2000 (LOS F). AC Transit ridership would increase from 0.85 passengers per seat in 1995 to 1.30 in 2000 (LOS E). The capacity of BART is based on the maximum capacity of BART's computer system to track trains. The crowding projected for BART could not be fully mitigated during the peak period because of the system's technical operating limits.

An increase of seven percent in ridesharing from the Downtown & Vicinity across the Bay Bridge is projected for 2000. Even with substantial shifts to transit and ridesharing by commuters from the Downtown & Vicinity, by 2020 severe congestion on the Bay Bridge and its approaches would last for more than five hours. The number of regional vehicle trips which could not be served by the Bay Bridge during the p.m. peak period (4:00-6:00 p.m.) would grow from about 3,100 vehicles in 2000 to about 5,800 in 2020.

Mitigating those levels of congestion would require consideration of major changes to the regional transbay transportation system connecting the West Bay and East Bay. Virtually all of the concepts would require the City to work with MTC, Caltrans, and local government agencies to undertake the regional planning needed to expand transbay transportation capacity. (*Mission Bay EIR*, Vol. II, pp. VI.E.31-34, 37-41, 71-92, 94-124, 126-127, 129-133, 215-216, and 226-230; *South of Market EIR* pp. 98-105, and 111-124.)

Peninsula Corridor

Between 1985 and 2000, traffic would increase on U.S. 101 and Interstate 280, the freeways serving the Peninsula. However, there would be less congestion on those routes at the San Mateo County Line than on the Golden Gate and Bay Bridges. Both U.S. 101 and I-280 were only moderately congested at the San Mateo County line in 1985. In or near San Francisco, the capacity of local streets, U.S. 101, and I-280 would be sufficient to handle future travel demand; the switch from highway modes by Downtown & Vicinity commuters assumed for the Golden Gate and Bay Bridges would not be required for the routes serving the Peninsula. The transit analysis for 2000 and 2020 in this regional corridor therefore uses the same amount of transit capacity as in 1985.

U.S. 101 at the San Mateo County line would operate at capacity for about three hours in 2000, with heavy congestion and speeds of 30 miles per hour occurring during that afternoon peak period. By 2020, heavy congestion on U.S. 101 would last for over three afternoon hours. I-280 would operate with moderate congestion at the county line in 2000 and 2020 with speeds averaging 35 to 45 miles per hour throughout the peak period. The congestion projected in 2020 would be reduced if commuters from the Downtown & Vicinity chose to increase their use of transit or ridesharing above the 1985 levels.

Transit ridership to the Peninsula would grow, although not to the extent that transit capacity would have to be increased above the 1985 levels. In 2000, the level of service on transit would remain high during the p.m. peak period (LOS B or C for all carriers), as there would be no system where ridership would be greater than available seats. Use of BART and SamTrans would grow by about ten percent while CalTrain ridership would grow by just five percent (assuming the CalTrain station remains at Fourth and Townsend Streets). In 2020, CalTrain, BART and SamTrans would carry even larger loads, but would continue to operate below capacity (LOS B or C). (*Mission Bay EIR*, Vol. II, pp. VI.E.31-34, 37-38, 42-43, 61-62, 71-92, 94-124, 127-133, 216-217, and 230-231; *South of Market EIR* pp. 98-105, and 111-124.)

Regional Highway Constraint Points

As a result of growth in regional travel demand, the following freeway segments lying beyond the screenlines in the transportation analysis could constrain San Francisco travel: the I-80/580/I-880 interchange in Oakland; the Caldecott Tunnel on State Route 24; I-80 in Alameda and Contra Costa Counties; U.S. 101 in Marin County; and U.S. 101 south of I-380 in San Mateo. (*Mission Bay EIR*, Vol. II, pp. VI.E.133-140.)

Local Transit and Streets

MUNI

To analyze cumulative impacts on MUNI, individual MUNI routes were grouped on the basis of the location of their alignments and stops into the "Northeast," "Northwest," "Southwest," and "Southeast" areas of San Francisco, referred to as "screenlines." By 2000, ridership would generally be accommodated on the MUNI screenlines. Slight overcrowding (LOS E) would occur on the Northwest screenline during the p.m. peak hour, and on the Northeast screenline during the p.m. peak period. However, by 2020, all but the Southwest screenline would be operating beyond MUNI's load standard (an overall average of 1.25 passengers per seat). Additional service required could include new light rail service to the Geary Boulevard corridor to the northwest, and to the Bayshore corridor in the southeast area of the City. (*Mission Bay EIR*, Vol. II, pp. VI.E.34-35, 93-99, 103-104, 114-124, 129-133, 217, and 231; *South of Market Plan EIR*, pp. 98-102, 112-117, C-19-21, and C-37.)

Local Streets

The *Mission Bay* and *South of Market EIRs* assumed the transportation network that existed before the Loma Prieta earthquake to be in place in the future. The following discussion is based on that assumption, modified to account for the fact that the Embarcadero Freeway has been demolished.

Severe congestion would continue to occur in both 2000 and 2020 on several of the James Lick (I-80) freeway approaches in the South of Market area. Those streets and freeway ramps serve traffic destined for the Bay Bridge and Peninsula. Several of those streets are heavily congested now. The number of severely congested I-80 approach intersections would increase by 2000 and increase again by 2020, and this congestion would be worse than was projected by the *Mission Bay* and *South of Market EIRs* because the roadway that eventually replaces the Embarcadero Freeway would likely have less travel capacity than did the elevated freeway.

The First/Harrison Street, Fifth/Bryant Street, and Sixth/Brannan Street intersections presently operate at LOS F during the P.M. peak hour, and would continue to do so in the future. Other intersections at or near freeway ramps, such as Fourth and Harrison, would likely deteriorate in the future. In particular, the queue for the Fourth/Harrison on-ramp has increased noticeably in the p.m. peak hour since the earthquake. Intersections near freeway ramps are often affected by freeway access queues, as cars waiting to enter the freeway back up to or through these intersections. This affects local traffic attempting to use streets in these areas. Some traffic will shift and use less congested routes in the future as this problem increases. Continued enforcement of the ordinance passed in 1987 prohibiting blocking an intersection should help to limit this problem.

By 2000, certain improvements to the local street network are planned to be in place, which would facilitate traffic circulation and access to I-280 by travelers from the Downtown & Vicinity. As a result of the I-280 Transfer Concept Program and Mission Bay Plan, King Street would be improved to function as a major roadway, with new on- and off-ramps to I-280. With cumulative development, the new major intersections at Third/King Streets, and Fourth/King Streets are projected to operate at LOS D in year 2000, and LOS E and F in 2020, respectively. Mitigation measures to provide for more left-turn lanes and tow away lanes during commute periods would reduce congestion. (*Mission Bay EIR*, Vol. II, pp. VI.E., 140-148, 166-175, 200-201 and 218-219; *South of Market EIR*, pp. 105-106, and 124-126.)

It is expected that operating conditions on other local South of Market streets and intersections not serving freeway ramps (or near freeway-serving intersections) would continue to operate in a generally free flowing manner in the future, at least to 2000.

For the local street system to operate at the level described above, there would have to be a high level of public transit use in the Downtown & Vicinity. In 1985, about 55 percent of all afternoon peak-hour outbound trips from the Downtown & Vicinity were on public transit. That level of transit could grow to about 70 percent of all trips, based on the increased capacity of transit systems expected to be available by 2000, and the congestion levels estimated to occur in the future.

As described on page 56, the Embarcadero Freeway has been demolished. Given this fact, the local street system serving The Embarcadero roadway will operate differently than the manner in which it served the Embarcadero Freeway. Generally, queues and delays at intersections would be lengthened along the street corridors leading to remaining Bay Bridge ramps during the afternoon commute. Also, an increase in average delays on the Bay Bridge would be expected during the morning commute period. Any proposal for the construction of a new roadway along The Embarcadero will be subject to separate environmental review.

PROJECT IMPACTS

Travel Demand

The information in this section is derived from the *Pacific Center EIR Transportation Analysis*, prepared by Korve Engineering, Inc. in consultation with the Department of City Planning, dated December 16, 1992. A copy of that report is on file and available for public review at the Department of City Planning.

Pedestrian intercept surveys were conducted as part of the traffic and transportation analysis to provide trip generation and modal split characteristics of retail establishments in the Union

Square/lower Market Street area. The surveys were conducted at the Neiman Marcus Department Store and the San Francisco Shopping Centre over a six day period in November and December, 1991. The survey locations were selected due to their size similarities, travel access, land uses, and other characteristics. The surveys focused on the travel characteristics of patrons and employees in these prime retail establishments, emphasizing the identification of the peak arrival and departure hour/period, and mode of travel. The surveys' results were the basis for formulation of trip generation and modal split characteristics used in the Pacific Center traffic analyses. Trip generation characteristics for office space was based on the *Guidelines for Environmental Review: Transportation Impacts* (Guidelines), prepared by the Department of City Planning in July, 1991.[2]

To develop a conservative analysis, existing buildings are assumed to be unoccupied, and all proposed mechanical, maintenance, parking, loading and open spaces are treated as trip generating retail space.

The project would generate employee and visitor trips from both its retail and office components. The project would generate approximately 49,630 daily person trips on a typical (non-holiday) weekday, 72,680 daily person trips on a typical weekend, 56,040 daily person trips on a holiday period (Thanksgiving to Christmas) weekday, and 119,220 daily person trips on a holiday period weekend. The portion of these total daily trips occurring during the peak hour periods would be as follows: about 5,705 typical weekday midday (12:00-2:00 p.m.) peak hour trips, 4,505 typical weekday P.M. (4:00-6:00 p.m.) peak hour trips, and 7,170 typical weekend midday peak hour person trips, and 7,340 holiday period weekday midday peak hour trips, 5,635 holiday period weekday P.M. peak hour trips, and 14,900 holiday period weekend midday peak hour trips.

Mode Split

The mode split for the retail component of the proposed project varies by region and by peak hour analysis scenario (see Appendix C, Table C-5). Table 2, below, shows the project-generated person trips by mode.

The northeast quadrant of San Francisco had the lowest auto mode split rate and the north bay area had the highest auto mode split rate in all of the analysis scenarios. The mode split for the office component of the project was derived from the Guidelines. The portion of these peak hour trips that

TABLE 2

PROJECT-GENERATED PERSON TRIPS BY MODE

Travel Mode	Typical Weekday Midday Peak	Typical Weekday PM Peak	Typical Weekend Midday Peak[1]	Holiday Weekday Midday Peak	Holiday Weekday PM Peak	Holiday Weekend Midday Peak[1]
Auto[2]	1,630	1,408	2,867	2,167	2,135	6,626
MUNI	823	963	1,191	1,366	1,303	2,295
BART	1,034	635	882	968	459	2,249
AC Transit	91	43	29	115	23	178
SamTrans	4	15	6	58	16	30
CalTrain	31	48	23	91	33	59
GG Transit Bus	36	15	29	52	16	69
Ferry	13	4	18	62	42	50
Walk	1,847	1,167	1,658	2,021	1,291	1,560
Taxi[3]	8	43	198	90	130	246
Other	193	163	268	347	183	1,539
TOTAL[4]	5,704	4,505	7,166	7,337	5,633	14,902

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[1] No office trips generated on the weekend.

[2] Auto vehicle occupancy rates vary by origin of trip and analysis scenario, ranging from a low of 1.2 to a high of 2.7 (see Appendix C, Tables C-5 and C-6, for a summary of the project mode splits).

[3] Taxi occupancy rates vary by origin of trip and analysis scenario, ranging from a low of 1.2 to a high of 3.0 (see Appendix C, Tables C-5 and C-6, for a summary of project mode splits).

[4] Totals may not add up exactly due to rounding.

Source: Korve Engineering, Inc., July 1992.

would be auto trips (with auto occupancy rates factored in) would be as follows: about 905 during a typical weekday P.M. peak hour, 1,790 during a typical weekend midday peak hour, 1,230 during a holiday weekday P.M. peak hour, and 2,885 during a holiday weekend midday peak hour.

Transit

Local Transit

There are 12 MUNI routes and two Cable Car lines with stops within one block of the project site. MUNI Metro and BART service is accessible via the Powell Street transit station, located adjacent to the site below Market Street. There are five additional MUNI routes within one-quarter mile of the site, eight additional routes within one-third mile of the site, and five additional routes within one-half mile of the site. Public transit service to the East Bay is provided by BART, adjacent to the site, Alameda County (AC) Transit which stops at the Transbay Terminal, about three and one-half blocks east of the site, and the Golden Gate Bridge, Highway and Transportation District (Golden Gate Transit) ferry service from the Ferry Building, about ten blocks from the site. Service to the Peninsula is provided by the San Mateo County Transit District (SamTrans), with bus routes and stops along Mission Street, one block south of the site, and CalTrain, its northern terminus currently located at Fourth and Townsend Streets, about eight blocks south of the site. Service to the North Bay is provided by Golden Gate Transit, with bus routes and stops along Howard and Folsom Streets, respectively two and three blocks south of the site, and ferry service to Larkspur and Sausalito. Figure 16, page 62, shows transit routes in the project area. Photographic examples of P.M. peak-hour loading on MUNI vehicles are in Appendix C, Figures C-1 to C-2.

During the P.M. peak hour in 1991, most of the transit agencies were found to operating at Level of Service (LOS) D or better. The exception was the Southwest screenline of MUNI, where conditions were found to be at LOS E. Table C-4, Appendix C, contains descriptions of the various LOS for transit. In year 2000 with cumulative growth, most of the transit services would continue to operate at LOS D or better during the P.M. peak hour. The exceptions would be the Southwest screenline of MUNI, where conditions would degrade to LOS F, and BART East Bay, where conditions would degrade to LOS E.

In the P.M. peak hour on a typical weekday in year 2000, about 540 (0.02 percent of existing trips) new outbound MUNI trips among all four of the MUNI screenlines would be generated by the project. Addition of the P.M. peak hour MUNI riders would incrementally increase the loading ratios across all of the screenlines once they dispersed among the numerous routes within those corridors. MUNI operates at a financial loss providing service in the downtown. The cost of MUNI ridership generated by the project would not be offset by the requirement of fees, such as those required by the Transit Impact Development Fee (TIDF) ordinance, because the TIDF only applies to net increases in office space (the project proposes a net reduction in office space).

Addition of BART riders from the project site to existing BART ridership would also incrementally increase P.M. peak hour Transbay and westbay loading ratios in year 2000, but not change LOS. Existing and year 2000 P.M. peak hour BART ridership would be increased by approximately one percent. A ridership increase of this magnitude would not be measurable against the day-to-day fluctuations in transit ridership. Similar to MUNI, however, BART also operates at a cost deficit, which would increase with additional riders generated by the project. BART's operating deficit per passenger is likely to decline in real terms as planned service improvements become operational in the future, attracting a net increase in ridership.

As discussed on pages 88 to 91, the project would also contribute to cumulative increases in transit ridership on other regional carriers besides BART serving downtown San Francisco that would result in an increase in loading ratios (and a deteriorated level of service). Further detail on the potential project impacts on regional transit facilities is contained in the background transportation analysis prepared for the project (see particularly pages 48 to 57), on file at the Department of City Planning.

Traffic

Local Intersection Traffic

Impacts of the project were assessed for six local signalized intersections in the vicinity of the site. A discussion of the methodology used in the analysis of the study intersections appears in Appendix C. The analysis considers three scenarios (existing, existing plus project and cumulative year 2000), during four different peak travel periods (non-holiday weekday P.M. peak hour [4:00-6:00 p.m.], non-holiday weekend midday peak hour [12:00-2:00 p.m.], holiday [Thanksgiving through Christmas] weekday P.M. peak hour, and holiday weekend midday peak hour). The analysis examines the impacts anticipated during the peak hour within the two-hour peak period for each scenario. The discussion below summarizes information contained in Table 3, page 102.

Level of Service (LOS) D (Volume to Capacity (V/C) ratio 0.81-0.90) represents traffic operations at signalized intersections within the acceptable LOS range. LOS E (V/C ratio 0.91-1.00) represents intersection capacity and is not within the acceptable LOS range. The proposed project would have a significant impact if it resulted in a deterioration in LOS from LOS D or better to LOS E or worse, or caused an LOS E or LOS F condition to deteriorate substantially. If proposed mitigation measures (Chapter V., page 135) could not alleviate a project-related traffic impact, it would be considered a significant environmental effect that cannot be avoided if the proposed project is implemented (see Chapter VI, page 142).

Existing Conditions

Currently, five of the six intersections operate at LOS C or better on a typical weekday during the P.M. peak hour; the intersection of Fifth Street/Mission Street operates at LOS E with a V/C ratio of 0.91. All six intersections currently operate at LOS C or better on a typical weekend during the midday peak hour. During a holiday weekday P.M. peak hour, five of the six intersections operate at LOS C or better; the exception is Fifth Street/Mission Street, operating at LOS D. On a holiday weekend midday, five of six intersections operate at LOS C or better; Fifth Street/Mission Street operates at LOS F with a V/C ratio of 1.08 during the weekend midday peak hour.

Existing Plus Project Conditions

During the typical weekday P.M. peak hour, LOS operating conditions at Fourth Street/Mission Street would shift from LOS C to LOS D with a V/C ratio of 0.83; Fifth Street/Mission Street would shift from LOS E with a V/C ratio of 0.91 to LOS E with a V/C ratio of 1.00; Stockton Street/O'Farrell Street would shift from LOS B to LOS C; and Fourth/Harrison Street would shift from LOS B to LOS C. All other study intersections would continue under their existing LOS. During the typical weekend midday peak hour, Fourth Street/Market Street would shift from LOS A to LOS B; Fifth Street/Market Street would shift from LOS C to LOS E with a V/C ratio of 0.98; Fifth Street/Mission Street would shift from LOS B to LOS D; and Stockton Street/O'Farrell Street would shift from LOS A to LOS B. All other study intersections would continue under their existing LOS.

TABLE 3

EXISTING AND PROJECTED PEAK-HOUR INTERSECTION VOLUME-TO-CAPACITY RATIOS (V/C) AND LEVELS OF SERVICE (LOS)[1,2]

	Typical Weekday P.M. Peak Hour						Typical Weekend Midday Peak Hour					
	Existing[3]		Existing + Project		Cumulative Year 2000		Existing[3]		Existing + Project		Cumulative Year 2000	
Intersection	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS
Fourth/Market	0.62	B	0.70	B	0.77	C	0.46	A	0.64	B	0.70	B
Fifth/Market	0.48	A	0.58	A	0.67	B	0.79	C	0.98	E	1.16	F
Fourth/Mission	0.77	C	0.83	D	0.98	E	0.42	A	0.49	A	0.56	A
Fifth/Mission	0.91	E	1.00	E	1.17	F	0.65	B	0.85	D	0.99	E
Stockton/O'Farrell	0.64	B	0.73	C	0.80	C	0.54	A	0.64	B	0.70	B
Fourth/Harrison	0.70	B	0.72	C	0.82	D	0.33	A	0.34	A	0.38	A

	Holiday Weekday P.M. Peak Hour						Holiday Weekend Midday Peak Hour					
	Existing[3]		Existing + Project		Cumulative Year 2000		Existing[3]		Existing + Project		Cumulative Year 2000	
Intersection	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS
Fourth/Market	0.61	B	0.72	C	0.78	C	0.59	A	0.93	E	0.99	E
Fifth/Market	0.73	C	0.86	D	0.95	E	0.73	C	0.98	E	1.06	F
Fourth/Mission	0.60	A	0.68	B	0.77	C	0.65	B	0.83	D	0.92	E
Fifth/Mission	0.85	D	0.99	E	1.18	F	1.08	F	1.31	F	1.45	F
Stockton/O'Farrell	0.63	B	0.68	B	0.75	C	0.52	A	0.73	C	0.78	C
Fourth/Harrison	0.62	B	0.65	B	0.73	C	0.50	A	0.54	A	0.61	B

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[1] LOS descriptions and relationship to V/C ratios are shown in Table C-1, page A-47 of Appendix C.

[2] V/C ratios, and associated LOS, are computed by assigning traffic volumes on each intersection approach to available travel lanes to determine the volume of the critical movements at the intersection. The assignment process requires assumptions, based on observation and judgement, regarding patterns of lane usage by drivers at the intersection. Factors that influence these patterns include physical conditions (e.g., the number of travel lanes) and traffic regulation conditions (e.g., parking prohibition during certain hours, and diamond lanes (for buses and right turns only)).

[3] Existing LOS based on counts conducted by Korve Engineering, Inc. in November and December 1991, and information gathered for other recent nearby projects by the Department of City Planning.

Source: City and County of San Francisco Department of City Planning; Korve Engineering, Inc.

During the holiday weekday P.M. peak hour, Fourth Street/Market Street would shift from LOS B to LOS C; Fifth Street/Market Street would shift from LOS C to LOS D with a V/C ratio of 0.86; Fourth Street/Mission Street would shift from LOS A to LOS B; Fifth Street/Mission Street would shift from LOS D to LOS E with a V/C ratio of 0.99; Stockton Street/O'Farrell Street and Fourth Street/Harrison Street would continue operating at LOS B. During the holiday weekend midday peak hour, the Fourth Street/Market Street intersection would shift from LOS A to LOS E with a V/C ratio of 0.93; Fifth Street/Market Street would shift from LOS C to LOS E with a V/C ratio of 0.98; Fourth Street/Mission Street would shift from LOS B to LOS D with a V/C ratio of 0.83; Fifth Street/Mission Street would shift from LOS F with a V/C ratio of 1.08 to LOS F with a V/C ratio of 1.31; Stockton Street/O'Farrell Street is projected to shift from LOS A to LOS C; and Fourth Street/Harrison Street would continue operating at LOS A as in the existing condition.

Cumulative Year 2000 Conditions

Cumulative traffic growth in the area will result from development occurring in the downtown area, the Civic Center area, and the South of Market area. The localized aspects of cumulative development on streets and intersections were analyzed using underlying growth factors. It is estimated through this method that traffic at intersections in the vicinity of the project site will increase by an average of nine percent by the year 2000.

During a typical weekday P.M. peak hour under cumulative conditions, the Fourth Street/Market Street intersection would operate at LOS C; Fifth Street/Market Street would operate at LOS B; Fourth Street/Mission Street would operate at LOS E with a V/C ratio of 0.98; Fifth Street/Mission Street would operate at LOS F with a V/C ratio of 1.17; Stockton Street/O'Farrell Street would operate at LOS C; and Fourth Street/Harrison Street would operate at LOS D. During a typical weekend midday peak hour, Fourth Street/Market Street would operate at LOS B; Fifth Street/Market Street would operate at LOS F with a V/C ratio of 1.16; Fourth Street/Mission Street would operate at LOS A; Fifth Street/Mission Street would operate at LOS E with a V/C ratio of 0.99; Stockton Street/O'Farrell Street would operate at LOS B; and Fourth Street/Harrison Street would operate at LOS A.

During the holiday period weekday P.M. peak hour, the Fourth Street/Market Street intersection would operate at LOS C; Fifth Street/Market Street would operate at LOS E with a V/C ratio of 0.95; Fourth Street/Mission Street would operate at LOS C; Fifth Street/Mission Street would operate at LOS F with a V/C ratio of 1.18; Stockton Street/O'Farrell Street; and Fourth Street/Harrison Street would operate at LOS C. During the holiday period weekend midday peak hour, Fourth Street/Market Street would operate at LOS E with a V/C ratio of 0.99; Fifth Street/Market Street would operate at LOS F with a V/C ratio of 1.06; Fourth Street/Mission Street would operate at LOS E with a V/C ratio of 0.92; Fifth Street/Mission Street would operate at LOS F with a V/C ratio of 1.45; Stockton Street/O'Farrell Street would operate at LOS C; and Fourth Street/Harrison Street would operate at LOS B.

Table 4, below, summarizes the times and locations when the proposed project would cause a significant deterioration in the levels of service at local intersections. During preparation of the *Pacific Center EIR Transportation Analysis*, the document upon which this section of the EIR is based, a variety of potential traffic mitigation measures were examined for their feasibility; these included traffic lane restrippings, intersection reconfigurations, and on-street parking restrictions. These mitigation measures were reviewed by the San Francisco Departments of Parking and Traffic and City Planning, and it was determined that they either would not mitigate significant impacts of the proposed project, or would be incompatible with the traffic engineering standards of the City. A full recitation of these measures, including the reasons for their rejection, is contained in an appendix to the *Transportation Analysis* (this document is on file and available for public review at the Department of City Planning, Office of Environmental Review, 450 McAllister Street). Because none of these potentially significant impacts could be mitigated to less than significant levels, they are identified in EIR Chapter VI, Significant Environmental Effects that Cannot Be Avoided if the Proposed Project Is Implemented. (Alternative C, Smaller Project, would have nine unavoidable significant intersection LOS impacts, and Alternative D, Underground Transit Connection, would have 11 unavoidable significant intersection LOS impacts, compared to 16 which would occur as a result of the proposed project.)

Freeway Corridor Analysis

The project would contribute to increases in traffic on the major freeways serving the Downtown & Vicinity. Traffic generated by the project itself would increase total traffic on major freeways during the P.M. peak hour by about one percent or less. Such increases would not be measurable against the day-to-day fluctuations in traffic volumes. Because the Bay Bridge P.M. peak-hour eastbound traffic flow is functionally at capacity, the travel demand from the project would not be expected to

TABLE 4

TIMES AND LOCATIONS OF POTENTIALLY SIGNIFICANT DETERIORATION IN LEVELS OF SERVICE AT LOCAL INTERSECTIONS[1]

	Typical Weekday PM Peak Hour		Typical Weekend Midday Peak Hour		Holiday Weekday PM Peak Hour		Holiday Weekend Midday Peak Hour	
Intersection	EP	C	EP	C	EP	C	EP	C
Fourth/Market							X	X
Fifth/Market			X	X		X	X	X
Fourth/Mission		X						X
Fifth/Mission	X	X		X	X	X	X	X
Stockton/O'Farrell								
Fourth/Harrison								

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[1] EP = Existing plus project conditions; C = Cumulative year 2000 conditions (plus project). None of these instances of level of service deterioration could be reduced to less than significant levels, and therefore would be considered unavoidable significant impacts of the project. Refer to EIR Chapter VI and Table 10 for more information on this subject.

Source: Korve Engineering, Inc.; EIP Associates.

increase the flows on the Bay Bridge in the peak hour; rather, the East Bay-bound auto traffic from the project would most likely compete with and delay existing users of the Bay Bridge into later portions of the peak period. This competition for access would occur at the on-ramps to the Bay Bridge and any displacement of existing users to later time periods would depend upon the time of arrival of project vehicles at the on-ramps. Some drivers would shift to carpools or transit as a result of cumulative displacement. Because retail shopping patrons (who would generate the bulk of the project trips) would not be as likely to be on fixed schedules as would be project employees (and other area workers), some patrons might choose to make their trips at times other than the peak period.

Pedestrian Movements

The primary entrance to the proposed project would be at an entry arcade located at the southwest corner of Fourth and Market Streets, providing access to the inner courtyard where elevators and escalators to upper level office and retail space would be located. Secondary entrances to individual ground-level stores would be located along Fourth Street and Market Street.

Irregular street intersections along lower and middle Market Street reflect the merger of two offset street grids patterns. For the intersection adjacent to the project site, the Stockton Street and Ellis Street legs of the intersection on the north side of Market Street are offset (to the west) from the Fourth Street leg of the intersection on the south of Market Street. The eastern Market Street crosswalk reflects this diagonal orientation, while the western Market Street crosswalk does not; the western crosswalk was diagonally-oriented until the mid-1970s when its current perpendicular orientation was stripped. As part of the proposed project, the project sponsor is seeking to reorient the western Market Street crosswalk from its current alignment (perpendicular to Market Street) to an alignment parallel to the eastern crosswalk.

Pedestrian levels of service were calculated using the Transportation Research Board's *Highway Capacity Manual.*[3] For pedestrian sidewalks, corners and crosswalks (the pedestrian elements), pedestrian flow rates, or the number of pedestrians passing a point per unit of time, are the basis for the flow regimen designation. Operating conditions on pedestrian elements are evaluated in terms of pedestrian flow categories or regimen, which relate the density of pedestrians in a specific time period (pedestrian per foot of clear sidewalk width per minute) to the quality of pedestrian flow (the difficulty of maintaining walking paths and speeds on a sidewalk). Qualitatively, the flow regimen indicates the "freedom to choose desired speeds and to bypass others." (See Appendix C, pages A.48-A.49 for an explanation of pedestrian flow rates and levels of service. Figure C-2, pages A.59-A.60, shows photographs of sidewalk conditions for each flow regimen.)

Field surveys at five local intersections were conducted in November and December 1991, to determine the existing pedestrian volumes under typical and holiday conditions, for the weekday midday peak 15-minute period, weekday P.M. peak 15-minute period, and weekend midday peak 15-minute period.[4] The five intersections studied were Fourth/Market, Fifth/Market, Fourth/Mission, Fifth/Mission and Stockton/O'Farrell, and at each intersection location, sidewalk, crosswalk and corner pedestrian elements were analyzed.

Table 5, page 108, identifies the pedestrian locations where, under existing or cumulative conditions, impacts would result from the proposed project. The table also identifies recommended improvement measures, requiring public agency approval and implementation, which would reduce these impacts (see Appendix C, Figure C-3, for an illustration of these measures).

On a typical day (i.e., non-holiday) all sidewalk, corner and crosswalk elements currently operate with unimpeded conditions (LOS C or better) during the peak 15-minute period with the exception of the southwest corner of Fourth and Mission Streets, which operates at LOS D. During holidays, all sidewalk and crosswalk elements and most of the corner elements examined continue to operate with unimpeded conditions during the peak 15-minute period. The following corner elements operate at LOS D or worse during holidays: the southwest corner of Fourth/Mission; the southeast corner of Fifth/Mission; and the southeast, southwest and northwest corners at the Stockton/O'Farrell intersection.

The peak hour pedestrian person trips generated by the proposed project were calculated for typical days and holiday-period days. On typical days, the proposed project would generate approximately 1,780 person trips during the midday weekday peak 15-minute period, 1,410 person trips during the weekday P.M. peak 15-minute period, and 2,240 person trips during the weekend midday peak 15-minute period. On holiday-period days, the proposed project would generate approximately 2,295 person trips during the midday weekday peak 15-minute period, 1,760 person trips during the weekday P.M. peak 15-minute period, and 4,660 person trips during the weekend midday peak 15-minute period.

Conditions on sidewalks and crosswalks following addition of the project pedestrian travel to existing volumes would not result in an impact on a typical day. The corner analysis for a typical day indicates that the only corners to experience an impact from implementation of the project would be the southwest corner of Fourth/Mission during the weekday midday and P.M. peak 15-minute periods and the southeast corner of Fifth/Mission during the weekend midday peak 15-minute period.

Pedestrian volumes generated by the proposed project on holiday-period days would impact sidewalk, corner and crosswalk elements. The sidewalk analysis indicates pedestrian volumes generated by the proposed project on holiday-period days would have an impact on the west Fourth Street sidewalk

TABLE 5
PEDESTRIAN IMPACT LOCATIONS AND RECOMMENDED IMPROVEMENT MEASURES

INTERSECTION	Element	Location	Typical Weekday Midday		Typical Weekday PM		Typical Weekend Midday		Holiday Weekday Midday		Holiday Weekday PM		Holiday Weekend Midday		Recommended Improvement Measures	Secondary Effects from Recommended Improvement Measures
			EP	C	EP	C	EP	C	EP	C	EP	C	EP	C		
Fourth/Market	Sidewalk	A									X	X	X	X	Widen sidewalk	Remove parking on west side of Fourth Street. Relocate bus stop. Narrow street width of Fourth Street.
Fourth/Mission	Sidewalk	B											X	X	Widen sidewalk	Remove parking on west side of Fourth Street. Narrow street width of Fourth Street.
	Corner	SW	X	X	X	X			X	X	X	X	X	X	Widen sidewalk	Narrow street width of Fourth Street.
	Corner	NW											X	X	None	None
Fifth/Mission	Corner	SE		X			X	X	X	X	X	X	X	X	None	None
	Crosswalk	E											X	X	Widen crosswalk	Vehicle stop line setback further from intersection.
Stockton/O'Farrell	Corner	SE											X		Bulb corner	None
	Corner	SW											X	X	Bulb corner	None.
	Corner	NW											X	X	Bulb corner	None.
	Crosswalk	E											X	X	Widen crosswalk	Vehicle stop line set back further from intersection.
	Crosswalk	W											X	X	Widen crosswalk	Vehicle stop line set back further from intersection.
Fifth/Market																

NOTES: Blank boxes indicate no impact.
EP - Existing plus project.
C - Cumulative (including project).
NB - Northbound.
EB - Eastbound.
SB - Southbound.
WB - Westbound

Sidewalk Location A - west sidewalk between Market and Jessie Streets.
Sidewalk Location B - west sidewalk between Jessie and Mission Streets.
Sidewalk Location C - west sidewalk between O'Farrell and Geary Streets.

Corner Location:
- SE - southeast corner.
- SW - southwest corner.
- NW - northwest corner.

Crosswalk Location:
- E - east crosswalk.
- W - west crosswalk.

Source: Korve Engineering, Inc., EIP Associates.

adjacent to site. Intersections where corner elements would experience an impact from project-generated pedestrian volumes during holiday-period days include Fourth/Mission, Fifth/Mission and Stockton/O'Farrell. Impacts would also occur at the east crosswalk at Fifth/Mission and both the east and west crosswalks at Stockton/O'Farrell.

From the perspective of the weekend holiday shopper, some of the increases in pedestrian traffic would seem dramatic. In some locations where sufficient sidewalk area currently is present to allow for the free selection of walking speeds, bypassing other pedestrians and avoiding crossing conflicts with others, the project would cause noticeable congestion. Virtually all pedestrians would have their normal walking speed restricted to that of "shuffling," there would be insufficient space for passing slower pedestrians, and crossing and reversing direction would be extremely difficult.

Under cumulative conditions, increases in pedestrian volumes would not result in impacts on sidewalks or crosswalks on a non-holiday day in the year 2000. The corner analysis for a non-holiday day indicates that the only corners to experience an impact from implementation of the project in conjunction with cumulative development would be the southwest corner of Fourth/Mission and the southeast corner of Fifth/Mission. The periods that these corners would be impacted are the same as for the existing plus project condition, with the addition of the southeast corner of Fifth/Mission being impacted during the weekday midday peak 15-minute period. Pedestrian volumes on holiday-period days would impact sidewalk, corner and crosswalk elements. Pedestrian volumes on holiday-period days would have an impact on the west Fourth Street sidewalk adjacent to the site. Corner elements at the intersections of Fourth/Mission, Fifth/Mission and Stockton/O'Farrell would experience an impact from pedestrian volumes during the holiday period. Impacts would also occur at the east crosswalk at Fifth/Mission and at both the east and west crosswalks at Stockton/O'Farrell.

A study of potential improvements for pedestrian circulation and safety along Fourth Street was prepared by a private consultant under the aegis of the Chief Administrative Officer (CAO) with input from other public agencies, including the Department of City Planning and the San Francisco Redevelopment Agency and certain public associations.[5] The plan focused primarily on potential improvements to pedestrian circulation on the west side of Fourth Street between Folsom and Market Streets. Although the plan has not been officially adopted, the plan recommends several improvements that could affect the proposed project. These include: coating Fourth Street sidewalk with non-skid material; eliminating or relocating sidewalk advertisements, displays, trash receptacles, utility poles and other sidewalk obstructions which restrict pedestrian movement; eliminating the traffic lane on west side of Fourth Street between Market and Mission Streets, and widening the west sidewalk.

As noted in Chapter III.E, pedestrian mid-block crossings of Mission Street west of Fourth Street (to and from the Fifth and Mission Parking garage) are considered hazardous because, although stripped, this crosswalk remains unsignalized. A mid-block traffic signal on Mission Street at the entry/exit of the Fifth and Mission Parking Garage has been proposed by the San Francisco Department of Parking and Traffic. The proposed project would also generate pedestrian trips to and from the Fifth and Mission Parking Garage, some of which would cross at mid-block on Mission Street.

PARKING AND LOADING REQUIREMENTS AND DEMAND

Parking

Parking demand was projected for the project on the basis of the estimated vehicle traffic generated by the project. The project would create new parking demand of about 170 daily spaces for the office component, and between 785 and 2,885 short-term peak hours spaces for the retail component. The estimated project-generated peak hour parking demand would therefore range from about 955 on a typical weekday midday, to about 2,885 on a holiday weekend midday. The project would provide about 39,100 gross square feet of parking area, which the Department of City Planning estimates could accommodate 130 vehicles with tandem valet operations.[6] Table 6, below, summarizes on- and off-street parking utilization characteristics under existing and existing plus project conditions, with and without the Yerba Buena Center development. The parking characteristics description includes the future additional capacity provided by the expansion of the Fifth and Mission Parking Garage and the Ellis/O'Farrell Parking Garage, and includes the additional supply *and* demand resulting from the Yerba Buena Center garage expansion.

On-street parking supply in the project area (an area bounded by Fifth, Powell, Post, Kearny, Third and Howard Streets, with a "panhandle" extending down Fourth Street to Harrison Street) ranges from 238 to 338 spaces, with a utilization rate ranging from about 73 percent during the non-holiday, weekday midday peak hour, to about 95 percent during the holiday, weekend midday peak periods. The parking demand analysis conducted for the project assumed that available on-street parking

TABLE 6

PROJECT AREA PARKING UTILIZATION SUMMARY

ON-STREET	Typical Weekday 1-3 PM			Typical Weekday 4-6 PM			Typical Weekend 1-3 PM			Holiday Weekday 1-3 PM			Holiday Weekday 4-6 PM			Holiday Weekend 1-3 PM		
Parking Type	Supply	Demand	Util.	Supply	Demand	Util.	Supply	Demand	Util.	Supply	Demand	Util.	Supply	Demand	Util.	Supply	Demand	Util.
Existing Conditions																		
On-Street	248	180	73%	238	180	76%	338	319	94%	248	205	83%	238	203	85%	338	320	95%
Surplus			65			58			19			43			35			18
Existing Plus Project Without YBC Development																		
Existing	248	180		238	180		338	319		248	205		238	203		338	320	
Pac. Ctr. (+)	0	68		0	58		0	19		0	43		0	35		0	18	
Subtotal	248	248	100%	238	238	100%	338	338	100%	248	248	100%	238	238	100%	338	338	100%

OFF-STREET	Typical Weekday 1-3 PM			Typical Weekday 4-6 PM			Typical Weekend 1-3 PM			Holiday Weekday 1-3 PM			Holiday Weekday 4-6 PM			Holiday Weekend 1-3 PM		
Parking Type	Supply	Demand	Util.	Supply	Demand	Util.	Supply	Demand	Util.	Supply	Demand	Util.	Supply	Demand	Util.	Supply	Demand	Util.
Existing Conditions																		
Off-Street	5,952	5,055	85%	5,952	3,577	60%	5,812	4,723	81%	5,952	5,363	90%	5,952	4,925	83%	5,812	5,273	91%
Surplus		897			2,375			1,089			589			1,027			539	
Existing Plus Project Without YBC Development																		
Existing	5,952	5,055		5,952	3,577		5,812	4,723		5,952	5,363		5,952	4,925		5,812	5,273	
Pac. Ctr. (-)	(198)	0		(198)	0		(198)	0		(198)	0		(198)	0		(198)	0	
5th/Mission	841	712		841	505		841	540		841	757		841	695		841	744	
Pac. Ctr. (+)	130	886		130	967		130	1,772		130	1,297		130	1,331		130	2,867	
Ellis/O'Farrell	520	442		520	312		520	421		520	468		520	432		520	473	
Subtotal	7,245	7,095	98%	7,245	5,361	74%	7,105	7,456	100%	7,245	7,885	100%	7,245	7,383	100%	7,105	9,357	100%
Surplus/Shortfall		150			1,884			(351)			(640)			(138)			(2,252)	
Existing Plus Project With YBC Development																		
Ex. + Project	7,245	7,095		7,245	5,361		7,105	7,456		7,245	7,805		7,245	7,383		7,105	9,357	
YBC	1,000	5,105		1,000	3,609		1,000	4,768		1,000	5,105		1,000	3,609		1,000	4,768	
Total	8,245	12,200	100%	8,245.	8,970	100%	8,105	12,224	100%	8,245	12,990	100%	8,245	10,992	100%	8,105	14,125	100%
Surplus/Shortfall		(3,955)			(725)			(4,119)			(4,745)			(2,747)			(6,020)	

Notes: Pac. Ctr. (-) denotes the removal of the existing on-site supply; Pac. Ctr. (+) denotes the project-generated supply and demand; Ellis/O'Farrell expansion only, existing condition characteristics factored into existing condition analysis; Yerba Buena Center (YBC) PM and Weekend Midday demand pro-rated based upon existing typical conditions; (1,422) indicates a parking shortfall; Utilization is abbreviated Util.

Source: Korve Engineering, Inc., EIP Associates.

capacity would be used by persons driving to the site, before off-street parking was sought. The proposed project would result in the maximum utilization of the on-street parking capacity during peak hour periods. Some drivers avoiding off-street parking facilities may choose to park illegally when all on-street spaces are utilized.

The vehicles not accommodated by on-street facilities (or parked illegally) would use one of the off-street parking facilities located in the project area (off-street facilities surveyed were in an area bounded by Third, Kearny, Howard, Post, Powell and Fifth Streets). Under existing conditions, the off-street parking supply ranges from 5,812 to 5,952 spaces during weekends and weekdays, including the existing facility on the project site. Current occupancy levels at the seventeen off-street parking facilities surveyed are between 60 percent during a non-holiday, weekday P.M. peak period, to about 91 percent during a holiday weekend midday peak period. Under existing plus project conditions, off-street parking supply is expected to increase, ranging from 7,105 to 8,245 spaces. Also under existing plus project conditions, however, parking demand is expected to increase, with a range of 5,361 to 14,125 spaces, resulting in a parking space deficiency during most peak periods. This parking shortfall would range from 138 spaces during the holiday weekday PM peak period (without YBC development), to 6,020 spaces during holiday weekend midday peak period (with YBC development).

During peak periods, when the off-street parking supply is at effective capacity, vehicles not finding parking would add to local street and intersection congestion. The project would increase the parking demand during all peak use periods year-round, although some of the demand could be accommodated by a shuttle bus service to a designated satellite parking facility, a recommended improvement measure proposed as part of the project (see Mitigation Measures, below).

Loading Activity

Based upon data published in *Guidelines for Environmental Review: Transportation Impacts*,[7] the proposed project would generate about 154 service vehicle stops per day; about 23 service vehicle stops would be generated by the office component on the average day, and about 131 service vehicle stops would be generated by the retail component on the average day. Average demand for the project would be about 18 spaces per hour and peak hourly demand would be 21 spaces.

Under Section 152.1 of the *City Planning Code*, the project would be required to provide one loading space to serve the 108,160 sq. ft. of office space (0.1 space/10,000 gsf), and 19 loading spaces (12 ft.

by 35 ft.) to serve the 477,000 sq. ft. of retail space (one space/25,000 gsf) for a total requirement of 20 loading spaces. Pursuant to *Code* Section 153(a)(6), a project may substitute 2 service vehicle spaces for each required off-street loading space, provided that a minimum of 50% of the required freight loading spaces are provided. The proposed project would satisfy its *Code* required loading space by providing ten full-size truck loading spaces on the ground level, accessible via Jessie Street; the project would also provide 20 van loading spaces on the first parking garage level accessible via Fourth Street.

The width of Jessie Street is 20 ft., but when vehicles are parked on the south side of the street, the effective width is reduced to about 14 ft. Analysis of the design of the proposed Jessie Street loading/service area indicates that standard single-unit trucks (about 35 ft. in length) would generally be able to enter the loading area by backing in from an eastbound position on Jessie Street, as required by Department of Public Works standards. Occasionally, single-unit trucks would need to make three-point turns to enter the facility. Three-point turns take 2-3 minutes, and could restrict through traffic on Jessie Street. Typical semi-trailer moving vans (about 55 ft. in length) would have restricted maneuverability, and would not be able to back into the loading area. These trucks would need to use the loading space on the private driveway, double park on Jessie Street, or perform five- to seven-point turns. Five- to seven-point turns take 3-5 minutes to perform, and would adversely affect traffic flow on Jessie Street. The proposed loading/service area and ramp for the van loading and valet parking levels would be accessed via Fourth Street, opposite the Marriott Hotel. This ramp location could result in conflicts between project vehicles and pedestrians on Fourth Street.

DEMOLITION AND CONSTRUCTION TRAFFIC

During the projected 24-28-month construction period, transportation impacts would result from truck movements to and from the site during demolition and construction activity. Demolition would occur over a six to nine week period, and would generate an average of 40 truck movements per day in or out of the project site. Off-haul disposal would most likely occur in the city of Richmond or another East Bay location, between 9:00 a.m. and 3:30 p.m.. Access into the site would occur from either Fourth or Jessie Streets. Access to the East Bay would occur from the I-80 freeway to the Bay Bridge, most likely from Fourth Street to Folsom Street. Construction activities (steel erection and finishing) would generate an average of 40 truck movements per day during this 21-24-month period. Deliveries of materials would occur before 7:00 a.m., after 6:00 p.m., or between 9:00 a.m. and 3:30 p.m.

Construction truck access to the site would be via Fourth and Jessie Streets. Construction staging (other than off-site material storage) would be confined to the project site, two adjacent sidewalks and one parking lane. The west sidewalk on Fourth Street and the north sidewalk on Jessie Street fronting the project site would be closed for the entire 24-28 month construction period. A sidewalk barricade would be constructed in the parking lane along both streets for pedestrians. Pedestrians would be routed through a protected walkway during that period; however, sidewalk access to the Victorian Hotel adjacent to the site would not be obstructed. The curb parking lane along Fourth Street would be closed for the duration of construction. Closure of the curb lanes would result in the displacement of about 12 parking spaces and a reduction of street capacity. Any truck traffic from 7:00-9:00 a.m. or from 4:00-6:00 p.m. would coincide with peak-hour traffic, and would worsen service levels.

The effects of construction truck traffic would be a reduction of access street and haul route capacities, due to the slower movements and larger turning radii of trucks. The reduction in capacity would slow movement of traffic, including MUNI buses along haul routes. Lane blockage on Fourth Street by queued trucks, if queuing occurred, would reduce the capacity of this street and interfere with the operation of transit vehicles. MUNI lines that could be affected include lines 9X, 16X, 30, 45, and 73, and a MUNI curb stop along Fourth Street. Lane and sidewalk closures are subject to review and approval by the San Francisco Department of Public Works and MUNI.

Materials storage would be off-site, and would generate construction vehicle trips to the site; these trips are included in the above projections. Temporary parking demand from construction workers' vehicles, and impacts on local intersections from construction workers' traffic, would occur in proportion to the number of construction workers who would use private vehicles; by Union agreement, each subcontractor is required to make their own parking arrangements.

Additional developments in the immediate vicinity are in different stages of project approval or construction: Yerba Buena Center, the 55 Fifth Street Hotel and the Ellis/O'Farrell Parking Garage Expansion are currently under construction; the Fifth and Mission Parking Garage Expansion has been approved but is not yet under construction. Some construction phases of these nearby developments could overlap with construction of the project. In the event of combined construction periods of the proposed project and one or more of these other projects, construction truck traffic would be expected to increase further, and traffic congestion and transit delays could worsen beyond the conditions described above. Should one project be completed and a second begin soon after, construction truck traffic impacts would be prolonged, but not likely be further degraded.

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1. This general information is based on impact analysis carried out in the *I-280 Transfer Concept EIR*, 84.385E, May 23, 1985, which examined different surface route alternatives along The Embarcadero right-of-way. Any new roadway designs proposed for The Embarcadero would be subject to additional, separate environmental review.

2. Retail Rates: 8.24 person trips per 1,000 sq. ft. on a typical weekday midday peak hour with 50% inbound and 50% outbound; 7.30 person trips per 1,000 sq. ft. on a typical weekday P.M. peak hour with 48% inbound and 52% outbound; 12.07 person trips per 1,000 sq. ft. on a typical weekend midday peak hour with 54% inbound and 46% outbound; 11.00 person trips per 1,000 sq. ft. on a holiday weekday midday peak hour with 52% inbound and 48% outbound; 9.20 person trips per 1,000 sq. ft. on a holiday weekday P.M. peak hour with 48% inbound and 52% outbound; and 25.10 person trips per 1,000 sq. ft. on a holiday weekend midday peak hour with 53% inbound and 47% outbound.

Office Rates: 7.45 person trips per 1,000 sq. ft. on a weekday midday peak hour with 50% inbound and 50% outbound; and 1.56 person trips per 1,000 sq. ft. on a weekday P.M. peak hour with 17% inbound and 83% outbound.

3. *Highway Capacity Manual, Special Report No. 209*, Transportation Research Board, National Research Council, Washington, D.C., 1985, Chapter 13.

4. Pedestrian counts were taken by in November and December 1991 by Korve Engineering staff. The pedestrian impact analysis is included in the background transportation report for this project, on file and available for public review at the Department of City Planning.

5. San Francisco Chief Administrator Officer Office, Fourth Street Pedestrian Mitigation Study, February 1990. A copy of this report is on file and available for public review at the Department of City Planning, 450 McAllister Street, San Francisco.

6. Using the Department of City Planning's standard of about 215 sq. ft. per vehicle for tandem valet parking in downtown San Francisco, per May 4, 1989 memorandum, Dean L. Macris to City Planning Commission.

7. San Francisco Department of City Planning, *Guidelines for Environmental Review: Transportation Impacts*, July 1991.

E. AIR QUALITY

CUMULATIVE CONTEXT

The *Mission Bay* and *South of Market Plan EIRs* analyzed cumulative effects of development in the Downtown & Vicinity on regional air quality in the future. This material is incorporated by reference and summarized here. The analyses in those EIRs describe the continued failure of the Bay Area to attain federal ozone and carbon monoxide standards, a problem to which the project would contribute. (For more detail on air pollutant emissions and their impacts, see *Mission Bay EIR*, Vol. II, pp. VI.F.13-18.)

Motor vehicle exhaust emissions would continue to be the primary source of air pollutants in the Downtown & Vicinity. These emissions would affect local and regional air quality. Ozone (O_3) and carbon monoxide (CO) concentrations occasionally violate air quality standards at some locations in the Bay Area. Emissions of hydrocarbons (HC) and nitrogen dioxide (NO_2), precursors of ozone, would contribute to regional ozone concentrations. Emissions would also add to carbon monoxide concentrations at congested intersections.

Computer modeling of cumulative carbon monoxide concentrations at eight congested intersections analyzed in the *Mission Bay EIR* (five of which are intersections adjacent to freeway ramps) suggests that prior to the Loma Prieta earthquake, state and federal standards for eight-hour average concentrations (nine parts per million [ppm]) were violated on occasion at the intersection of Sixth and Brannan Streets (13.4 ppm) and at the intersection of Third and Berry Streets (9.2 ppm). With the temporary closure of I-280 for repairs, these two intersections currently are not congested; both the normal traffic and the resulting air quality effects have been dispersed to other intersections. When I-280 is re-opened, traffic at the study intersections is expected to return to pre-quake levels, resulting in air quality similar to pre-quake conditions. None of the eight intersections violate state or federal one-hour standards (20 ppm and 35 ppm, respectively). Carbon monoxide concentrations are expected to improve in the future throughout the region, due primarily to better vehicle emission controls. Carbon monoxide concentrations at the eight intersections, even with Mission Bay and cumulative growth in traffic, are projected to decrease. No violations of state or federal carbon monoxide standards are expected at those intersections in 2000 (or at buildout of Mission Bay in 2020). (For more detail on intersection carbon monoxide concentrations in the South of Market area, see *Mission Bay EIR*, Volume II, pages VI.F.9-10 and 17-18, and Table VI.F.4, page VI.F.19; *South of Market EIR* pages 140-142 and Table 10, page 143.)

PROJECT EFFECTS

Air quality impacts from a project result from project construction and operation. Construction emissions, primarily dust generated by earthmoving activities and criteria air pollutants emitted by construction vehicles, would have a short-term effect on air quality. Operational emissions, generated by project-related traffic and by combustion of natural gas for building space and water heating, would continue to affect air quality throughout the lifetime of the project.

The analysis in this section provides information that could be used to assess the project in relation to the thresholds of significance recommended by the Bay Area Air Quality Management District's *Guidelines for Assessing Impacts of Projects and Plans*. According to Test 1 of these *Guidelines*, "any project or plan which when added to background levels would generate carbon monoxide (CO) concentrations above State or federal CO standards would be of significant effect by definition." Test 2 of the *Guidelines* states that the level of emissions from a total of direct and indirect sources would be considered significant if emissions of HC, NO_x, SO_2, or Particulates equaled or exceeded 150 lbs/day (0.075 tons/day). For mobile sources, curbside CO concentrations are normally modeled; this second test indicates that 550 lbs/day of CO would be considered significant only if it were to lead to a violation of State standards under Test 1 modeling. Test 3 of the *Guidelines* states that "any project or plan should be considered of significant effect if emissions of any criteria contaminants from combined direct or indirect sources reaches or exceeds one percent of county emissions of the contaminant." CEQA Appendix G states that a project will normally have a significant air quality effect on the environment if it would "violate any ambient air quality standard, contribute substantially to an existing or projected air quality violation, or expose sensitive receptors to substantial pollutant concentrations." There are two other tests of significance: one applies only to stationary sources and the other applies to projects that would generate population or employment in excess of regional projects. These last two tests would not apply to the proposed project.

Construction Emissions

Construction activities would temporarily affect local air quality. Construction activities would not involve burning of any materials and would not create objectionable odors. Grading and other construction activities would temporarily affect local air quality for 24-28 months, causing a temporary increase in particulate dust and other pollutants. Dust emission during excavation would increase particulate concentrations near the site. Under high winds, exceeding 12 miles per hour, localized effects including human discomfort might occur downwind from blowing dust. Construction dust is composed primarily of particularly large particles that settle out of the atmosphere more rapidly with increasing distance from the source. More of a nuisance than a hazard for most people, this dust could affect persons with respiratory diseases, as well as sensitive electronic or communications equipment. The project sponsor would require the contractor to wet down the construction site at least twice a day during construction to reduce particulates by at least 50 percent, would require covering soil, sand and other material, and would require street sweeping around demolition and construction sites at least once per day (see Mitigation, page 139).

Operation Emissions

Upon completion, project operation would affect local air quality by increasing the number of vehicles on project-impacted roads and at the project site, and by introducing stationary emissions to the project site. Transportation sources would account for over 90 percent of operational project-related emissions. Stationary source emissions, generated by combustion of natural gas for building space and water heating, would be less-than-significant.

Curbside carbon monoxide concentrations at selected local intersections that would be affected by project-generated traffic and by cumulative development traffic were projected for conservative conditions and are compared with ambient standards in Table 7, page 119.

In 1991, the eight-hour CO concentrations at three of six selected intersections (Fourth/Mission, Fifth/Mission and Fourth/Harrison) are estimated to have violated air quality standards. Carbon monoxide concentrations are predicted to be less in 2000 than in 1991, and would not violate the standards at these intersections in this future scenario. Carbon monoxide levels are expected to be lower in the future due to emission controls required on new vehicles, which would offset increases in traffic volumes and congestion.

Table 8, page 120, shows projected daily emissions of pollutants in the year 2000 from project-generated traffic, and compares them with San Francisco County transportation-related emissions

TABLE 7

EXISTING AND PROJECTED CURBSIDE CARBON MONOXIDE CONCENTRATIONS AT SELECTED INTERSECTIONS

Intersection	Averaging Time	Concentrations (ppm)[1]	
		1991	2000
Fourth and Market	1-hour	12.1	9.4
	8-hour	8.5	6.6
Fifth and Market	1-hour	12.4	9.6
	8-hour	8.7	6.7
Fourth and Mission	1-hour	13.1	10.1
	8-hour	9.2	7.1
Fifth and Mission	1-hour	13.5	10.3
	8-hour	9.4	7.2
Fourth and O'Farrell	1-hour	12.1	9.3
	8-hour	8.5	6.5
Fourth and Harrison	1-hour	13.1	9.9
	8-hour	9.2	7.0

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[1] Calculations for all scenarios were made using a revised version of the Modified Linear Rollback (MLR) method described in the *Downtown Plan EIR*, EE81.3, certified October 18, 1984, Appendix O. Background concentrations were calculated to be 7.9 ppm for eight hours in 1990, and 6.2 ppm for eight hours in 2000. Any underlined values would be in violation of the state and federal CO standards. The one-hour State standard is 20 ppm, the one-hour federal standard is 35 ppm, and the eight-hour State and federal standards are 9 ppm. Emission rates were derived from the California Air Resources Board EMFAC7EP computer model, from the BAAQMD Guidelines, revised June 1991.

Source: EIP Associates.

TABLE 8

PROJECTED DAILY TRANSPORTATION-RELATED AIR POLLUTANT EMISSIONS FOR YEAR 2000

	Emissions (tons per day)[1]		
Pollutant	Project[1,2]	SF County 2000[3]	Bay Area[3]
Hydrocarbons	0.07	14	160
Nitrogen Oxides	0.10	22	270
Carbon Monoxide	1.17	120	1,400
Particulates (PM_{10})	0.17	28	310
Sulfur Oxides[4]	0.03	28	83

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1. Project emissions were calculated using BAAQMD EMFAC7EP vehicle emission factors. The conditions under which these emission factors apply (i.e., ambient air temperature, percentage of hot and cold starts) are documented in Table VI.B.2 of the BAAQMD *Air Quality and Urban Development Guidelines for Assessing Impacts of Projects and Plans*, September 1991. Emissions of particulates (PM_{10}) include dust disturbed from roadway surfaces.
2. Based upon a weighted daily average of 125,157-vehicle-miles traveled.
3. San Francisco County and Bay Area emissions correspond only to transportation-related emissions based on BAAQMD Emissions Inventory Summary Report (August 1987), and year 2000 emissions inventory for the Bay Area provided by Tirlochan Mangat, Manager, Special Projects Section, BAAQMD.
4. Sulfur oxides and sulfur dioxides are assumed to be interchangeable.

Source: EIP Associates.

(year 2000) and total transportation-related emissions in the Bay Area. The project would contribute less than one percent to the transportation-related emissions inventory for San Francisco in 2000, which is below the one percent threshold of significance, identified as Test 3 of the BAAQMD *Guidelines* defining a potentially significant impact on air quality.

Table 8 also indicates that emissions from the proposed project in year 2000 would exceed 150 lbs/day (0.075 tons/day) for the pollutants NO_x and particulates, and would exceed 550 lbs/day (0.275 tons/day) for CO. The BAAQMD *Guidelines* Test 2 identifies the emission of NO_x and particulates in excess of 150 lbs/day as a significant air quality impact. Hence, the project would be considered by the BAAQMD to have significant air quality impacts for these two pollutants. According to the *Guidelines*, CO emissions in excess of 550 lbs/day would only be considered to have a significant air quality impact if it leads to a violation of State or federal standards. Based on the information contained in Table 7, CO concentrations in the vicinity of the proposed project would not violate the standards.

Emissions of particulates resulting from construction and from vehicle trips generated by the project and cumulative development would increase particulate concentrations, which could increase the frequency of particulate standard violations in San Francisco, with concomitant health effects.[1]

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[1] State standards for particulate matter changed in 1983 and federal standards changed in 1987 to concentrate on respirable particulate matter (PM_{10}), which has been demonstrated to have health implications when inhaled. The present state and federal PM_{10} standards are $50 \mu g/m^3$ and $150 \mu g/m^3$, respectively, of respirable particulate matter. Although both the previous and present particulate standards are measured in $\mu g/m^3$, under the PM_{10} standards only those particulates 10 microns or less in size are measured. The BAAQMD (Thomas Perardi) has stated that TSP includes about 50 to 60 percent of particulates of 10 microns or less; thus, the TSP standards are generally equivalent to the PM_{10} standards. BAAQMD is presently monitoring PM_{10} at fourteen Bay Area monitoring stations, including the station at 16th and Arkansas Streets in San Francisco.

F. CONSTRUCTION NOISE

Ambient noise in the project vicinity is typical of noise levels in downtown San Francisco, which are dominated by vehicular traffic, including trucks, cars, MUNI buses and emergency vehicles. Sidewalk noise measurements taken at the southwest corner of Market and Fourth Streets, at the entrance of 22 Fourth Street and at the Pacific III loading dock, during the weekday evening peak commute period, show noise levels of about 75 dBA, 72 dBA and 65 dBA, respectively.[1,2] (See Appendix E for a table of typical noise levels found in the everyday environment.) The Environmental Protection Element of the *San Francisco Master Plan* indicates a day-night average noise level (L_{dn}) of 74 dBA along Fourth Street in 1974, and the *Downtown Plan EIR* indicates day-night average noise level (L_{dn}) of 73 dBA on Market and Fourth Streets in 1984.[3,4,5]

Short-term noise levels were measured between 4:30 p.m. and 5:30 p.m. at three locations to characterize the ambient noise in the project area. The predominant noise source in the project area is vehicular traffic. The noise levels at the three measurement locations range from 65 dBA on Jessie Street to 75 dBA on Market Street.

Construction of the Pacific Center, which would take place over a period of about 24-28 months, would increase noise levels in areas surrounding the project site. Construction noise levels would fluctuate depending on construction phase, equipment type and duration of use, distance between noise source and listener, and presence or absence of barriers between noise source and listener. To estimate probable noise impacts, this analysis assumes typical equipment and construction techniques. Table 9, page 123, shows typical exterior noise levels at 50 feet from the source associated with the different phases of construction. Interior noise levels at 50 ft. from the noise source would be about 10 to 15 dBA less than those shown in Table 9.[6] Closed windows would reduce noise levels by about 20 to 25 dBA below those shown in Table 9.

Construction noise is regulated by the San Francisco Noise Ordinance (Article 29 of the *City Police Code*). The ordinance requires that noise levels of construction equipment, other than impact tools, not exceed 80 dBA at a distance of 100 ft. from the source. Impact tools (jack hammers, pile drivers, impact wrenches) must have both intake and exhaust muffled to the satisfaction of the Director of Public Works. Section 2908 of the ordinance prohibits construction work at night, from 8:00 p.m. to

TABLE 9

TYPICAL COMMERCIAL/INDUSTRIAL CONSTRUCTION NOISE LEVELS AT 50 FEET FROM THE SOURCE

Construction Phase[2]	Duration of Phase[1] (months)	Average Noise Level (dBA)
Demolition	6-9	89
Erection	6	85
Exterior Finishing	12	89
Interior Finishing	3-6	--

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[1] There would be approximately three months of overlap from one construction phase to the next.

[2] Project construction phases and duration were provided by the project architect, Whisler-Patri. Dean Randell, telephone conversation, March 17, 1992.

Source: Bolt, Beranek and Newman, December 13, 1971, *Noise from Construction Equipment and Home Appliances*, Environmental Protection Agency.

7:00 a.m., if noise would exceed the ambient noise level by five dBA at the project property line, unless a special permit is authorized by the Director of Public Works.

The project would consist of adaptive reuse of the nine-story Pacific Building (Pacific I), the renovation of the adjacent 16-story 22 Fourth Street building (Pacific II), and the construction of a 10-story building (Pacific III) between Pacific II and Jessie Street. Pacific I, II and III would be integrated internally as a single structure. Project construction would generate high noise levels on and adjacent to the construction site intermittently during the construction period.

Noise levels greater than 60 dBA can interfere with normal speech and concentration. Noise levels greater than 70 dBA would require workers to close windows or shout to communicate. General stress reaction has been observed in humans exposed to brief sounds of 75 dBA.[7] At noise levels of 85 dBA, normal conversation is extremely difficult, and sleep or rest virtually impossible. Intermittent noises, such as pile driving noise, have a psychological effect on humans: they reduce perception of control over the environment. This perceived loss of control frequently results in a depressed mood and depressed motivation. High noise levels also can lead to physiological effects, such as elevated blood pressure.[8] Repeated impulse and intermittent sounds of high level appear more likely to be disruptive than continuous or steady sounds of comparable level.[9]

Pile foundations for Pacific III are already in place as a result of previous construction activity at the site; the proposed project would not include pile driving.

While project construction would not cause hearing loss, there would be a perceptive increase in the noise levels around the project site. The area of greatest potential construction noise effect would be at the Pacific II portion of the site, which is closest to the Victorian Hotel.

Land uses adjacent to the Pacific III portion of the site include the Victorian Hotel at the northwest corner of Fourth and Jessie Streets, the rear of the 833 Market Street office building, and two ground level cafes along Jessie Street (see Figure 10, page 40); these buildings all have operable windows. Visitors and residents of the Victorian Hotel, office workers at 833 Market Street, and restaurant employees and patrons would be adversely affected by construction noise. Exterior noise levels in this area, during the noisiest phases of construction (exterior finishing and demolition), would be as high as 93.2 dBA. With windows open, hotel visitors and residents, office workers, and restaurant employees and patrons would experience interior noise levels of about 78-83.2 dBA and, with windows closed, about 68-73.2 dBA. These noise levels would be annoying and disruptive to users of these facilities, especially day sleepers. As indicated in Table 9, demolition activity is expected to last 6-9 months, and exterior finishing is expected to last for about one year.

The Marriott Hotel, located on the east side of Fourth Street about 50 ft. from the project site, has 1,500 guest rooms, approximately one-third of which have non-operable windows facing the project site. Hotel guests staying in these rooms would experience during the noisiest phases of construction (exterior finishing and demolition), interior noise levels of about 69 dBA. These noise levels would be annoying and disruptive to users of this facility, especially day sleepers.

Other developments occurring within the project area include the Yerba Buena Center project, the Ellis/O'Farrell Parking Garage Expansion, the Fifth and Mission Parking Garage Expansion, and the 55 Fifth Street Hotel renovation. Should any of these projects' construction schedules coincide with that of the Pacific Center, noise levels could increase by two to five dBA. This increase would be audible (depending on the loudness of activity) and would also be annoying, since noise from construction of one project would be annoying to the nearest receptors (those within 100 ft.). Should one project be completed and a second begin soon after, impacts would be prolonged.

In summary, during the majority of construction activity, noise levels would be above existing noise levels in the project area. There would be times, particularly during the operation of impact wrenches, when noise would interfere with indoor activities in nearby offices, hotels/residences, visitor accommodations and restaurants adjacent to the project site. These impacts would be temporary in nature and limited to the period of construction. The construction contract would require that the project contractor muffle and shield intakes and exhausts, shroud or shield impact tools, and use electric-powered rather than diesel-powered construction equipment, as feasible, so that noise would not exceed limits stated in the City's Noise Ordinance (Article 29, *San Francisco Administrative Code*, 1972).

The project sponsor would require the general contractor to construct barriers around the site, and around stationary equipment such as compressors, which would reduce construction noise by as much as five dBA, and to locate stationary equipment in pit areas or excavated areas, as these would serve as noise barriers. Barriers could consist of berms or walls that would reflect or absorb noise and create an acoustic "shadow" zone. The more solid, high and wide a noise barrier, the more effective would be the noise attenuation. A wall may reduce noise by up to 20 dBA, while a berm may reduce noise by up to 23 dBA.[10]

To further reduce potential construction noise impacts to occupants of the Victorian Hotel, the project sponsor would hire an acoustical engineer to determine the most efficient and cost-effective means to mitigate noise impacts on the Victorian Hotel with specific emphasis on one or more of the following approaches:[11]

- installation of a "sound curtain" that could be hung on scaffolding on the south side of Pacific II and the east side of Pacific III;
- installation of second windows that would be hung on the north and west sides of the Victorian Hotel. Such windows would be constructed of 1/4" plate glass mounted on 2x4" wood frames, which would be bolted to the exterior facade approximately four inches from the permanent windows.

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1. Noise was measured by EIP Associates staff at the southwest corner of Market and Fourth Streets, at the entrance of 22 Fourth Street, and at the Pacific III site along Jessie Street, on December 11, 1991 between 4:30 p.m. and 5:30 p.m. Noise measurements were taken with a Quest Electronics M-28 Noise Logging Dosimeter, which was calibrated prior to and following the measurement.

2. A decibel (db) is a logarithmic unit of sound energy intensity. Sound waves, traveling outward from a source, exert a force known as sound pressure level (commonly called "sound level"), measured in decibels. A dBA is a decibel corrected for the variation in frequency response of the typical human ear at commonly encountered noise levels. Noise measurements presented in this section are given in dBA, L_{eq}. L_{eq}, the energy-equivalent noise level, is the equivalent continuous noise level which, in a stated period, would contain the same acoustic energy as the actual time-varying sound level measured during the same period.

3. L_{dn}, the day-night average noise level measurement, is based on human reaction to cumulative noise exposure over a 24-hour period, which takes into account the greater annoyance of nighttime noises. Noise between 10:00 p.m. and 7:00 a.m. is weighted 10 dBA higher than daytime noise.

4. San Francisco Department of City Planning, *San Francisco Master Plan*, Environmental Protection Element, pp.I.6.13 and I.6.15.

5. San Francisco Department of City Planning, *Downtown Plan EIR*, Case No. EE81.3, certified October 18, 1894, Volume 1, pp. IV.J.1-19, particularly Table IV.J.2, pp. IV.J.9-10.

6. United States Department of Transportation, Federal Highway Administration, *Policy and Procedure Memorandum 90-2*, February 8,1973.

7. The Central Institute for the Deaf, *Effects of Noise on People*, U.S. EPA, 1971.

8. Cohen, Sheldon et al., "Cardiovascular and Behavioral Effects of Community Noise," American Scientist, Volume 69, October 1981.

9. National Institute for Occupational Safety and Health, U.S. Department of Health, Education and Welfare, *Occupational Exposure to Noise*, 1972.

10. U.S. Department of Transportation, Federal Highway Administration, *Highway Noise*, December 1978.

11. These measures were developed by Charles M. Salter Associates, acoustical engineers, during preparation of the 1980 Pacific III Apparel Mart Building EIR (Case No. EE 80.315). At that time, it was determined that either one of the methods described would attenuate construction noise levels to 55 dBA.

G. EMPLOYMENT

PROJECT IMPACTS

Renovation of two existing buildings would result in the displacement from this site of about 20 existing businesses employing about 120 people. Of these employees, about 65 are office workers, about 40 are retail workers, and about 15 are building maintenance, security and janitorial staff.

At full operation, the project would accommodate about 1,800 workers on the site, consisting of about 1,350 retail workers, 400 office workers, and 50 parking, security and maintenance workers.[1] The 1,800 employees accommodated by the project would represent about one-half percent or less of the C-3 total employment in 2000. The increase would represent about 2.6 percent of citywide growth between 1985 and 2000.

The project would accommodate growth of retail and office employment in the C-3 District. It is expected that office businesses providing management, technical and professional services would occupy the project office space. Over time, the project is expected to be characteristic of C-3 District office buildings occupied by a mix of corporate and business service firms, with the unique feature of being linked with a major shopping center.

About 2,110-5,945 additional jobs in the Bay Area would result from the employment multiplier effect of project operation.[2] Construction of the new project would require about 243 person-years of construction labor.[3] About 304-625 additional person-years of employment would be generated in the Bay Area, as a result of the multiplier effect of project construction.[4]

CUMULATIVE EMPLOYMENT GROWTH

Forecasts of employment in the Downtown & Vicinity and in the City as a whole have been revised since the *Downtown Plan EIR* was prepared. The *Mission Bay* and *South of Market Plan EIRs* provide these updated forecasts. In summary, employment patterns in the City and the region in the future, particularly in the Greater Downtown, will depend somewhat on the development plan chosen and implemented in the Mission Bay area. The amount of employment growth forecast in the Bay Region would not change, but the location of jobs would be different. South of Market area employment growth is forecast to be relatively small compared to the rest of downtown and would have little influence on growth patterns.

Mission Bay Alternative A, with a combination of residential and commercial uses, would provide about 25,000 job opportunities. Citywide employment, including South of Market and the rest of the City, would grow by about 210,000 jobs between 1985 and 2020 under this scenario. Mission Bay Alternative B includes predominantly residential and open space uses and would provide about 6,000 jobs; citywide employment would grow by about 200,000 jobs and more of this growth would occur in the downtown and in the rest of the City between 1985 and 2020 than under Mission Bay Alternative A. Mission Bay Alternative N, with predominantly commercial and industrial development and no new housing, would contribute to citywide employment growth of about 207,000 jobs during the same time frame. The South of Market area would contribute about 24,000 jobs to these totals. The Mission Bay Plan approved by the City in 1991 is similar to Alternative A in employment.

The C-3 District would contribute different amounts to the Citywide employment totals, depending on Mission Bay development at buildout (in year 2020, about 360,800 jobs if Mission Bay Alternative A were the buildout scenario; about 362,200 jobs if Alternative B were the Mission Bay development picture; and about 362,200 jobs if the Mission Bay area were developed under present zoning as in Alternative N). In the year 2000, employment forecasts for the C-3 Districts or the entire city would not reflect as much variation as that indicated for year 2020, because Mission Bay would not be fully developed under any of the three alternatives. In the C-3 District, employment growth would be about 69,000 jobs between 1985 and 2000. (See *Mission Bay EIR*, Vol. II, pp. VI.B.53-79, and Vol. III, p. XIV.B.24-26; *South of Market EIR*, Appendix B, pp. B.10 to B.14; and *Downtown Plan EIR* pp. IV.C.29-61.)

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1. Employment is calculated from the estimates of sq. ft. of building space from the project description. Based on C-3 District employment density factors from the San Francisco Department of City Planning, *Downtown Plan EIR*, EE81.3, certified October 18, 1984 (268 sq. ft. per office employee; 350 sq. ft. per retail employee). Maintenance, security and parking employment would be about 50 workers based on estimates made by the project sponsor.

2. Indirect employment projections are based on the *1987 Input-Output Model and Economic Multipliers for the San Francisco Bay Area*, Center for Analysis and Information Services, Association of Bay Area Governments. The *1987 Input-Output Model* supersedes information contained in the

1988 Update of the *1982 Model.* The multipliers used were Type I (low end) and Type II (high end) employment multipliers contained in Table 10 of this model. Multipliers of 1.07 and 2.63 were used for retail jobs, 1.46 and 5.42 for office jobs, and 1.25 and 3.34 for maintenance and repair jobs.

3. Walter Denmead, Turner Construction Company, telephone communication, May 9, 1990. Assumes 18% of total construction cost is for labor, and that an average construction worker's salary is $44,400 per year.

4. *1987 Input-Output Model and Economic Multipliers for the San Francisco Bay Region*, Association of Bay Area Governments. Multipliers of 1.25 and 2.57 were used for non-residential construction jobs. The multipliers used were Type I (low end) and Type II (high end) employment multipliers contained in Table 10 of this model.

H. GROWTH INDUCEMENT

The project would contain a total of about 477,000 sq. ft. of retail space, about 108,000 sq. ft. of office space, about 19,000 sq. ft. of public open space, and about 98,000 sq. ft. of parking, loading and mechanical space, for a total development of about 702,000 sq. ft. The Floor Area Ratio (FAR) of the proposed project would be 9:1, achieved by the use of approximately 80,000 sq. ft. of Transferable Development Rights (TDR), obtained from as yet unidentified lots in the C-3 district.

Employment at the site would increase to about 1,800 people (there are currently about 120 employees on the site). Occupants of the proposed project could include tenants expanding or relocating from other San Francisco locations, tenants relocating from outside San Francisco, and firms new to the Bay Area. The increase in employment at the project site, therefore, would not necessarily represent employment that is new to San Francisco. If the project were fully leased, however, and the retail and office space of the project did not create permanent vacancies in other San Francisco buildings, total employment in San Francisco could increase by about 1,680 jobs due to the project. Approximately 2,110-5,945 additional jobs would be supported indirectly in San Francisco through the multiplier effect.

If marketed successfully, the project, together with other planned retail and/or office development, could have growth-inducing effects by demonstrating a market for retail and/or office space in this area. This could thereby encourage similar development on lots (including smaller lots assembled for development) currently occupied by low- or mid-rise buildings containing business support services. Increases in downtown retail and/or office space and employment would contribute to continued growth of local and regional markets for housing, goods, and services. These effects would be less extensive were the vacancy rate for retail and/or office space to continue to rise. Should this occur, projected increases in downtown employment would be less and the growth in demand for goods, services and housing would be lower.

It is expected that some downtown workers, including some in the project, would want to live in San Francisco. Employment growth, however, would not be reflected directly in increases in demand for housing and City services to residents, as some new jobs would be held by individuals who already live and work in the City; who live in the City but previously either did not work, or worked outside the City; who live in surrounding communities; or by those unable to afford or locate housing in the

City. New downtown workers would also increase demand for housing in other parts of the Bay Area.

Any net increase in employment downtown would increase the demand for retail goods and services in the area. The project would intensify this demand by increasing the amount of employment on the site, thereby increasing demand for goods and services in the vicinity. Increases in employment downtown would also increase demand for business services, to the extent that the expanded space would not be occupied by firms providing those services. In response, demand would increase for existing space and possibly for further new development.

The project would be built in a developed urban area, and no expansion to the municipal infrastructure not already under consideration would be required to accommodate new development and increased employment due to, or induced by, the project.

I. SEISMICITY

The closest active faults to San Francisco are the San Andreas Fault, about nine miles southwest of Downtown; the Hayward Fault, about nine miles northeast of Downtown; the San Gregorio Fault, about 20 miles west of Downtown; and the Calaveras Fault, about 22 miles east of Downtown. The project area would experience strong groundshaking (Intensity Level D, general, but not universal fall of brick chimneys; cracks to masonry and brick work) during a major earthquake.[1] The building would be required to meet current seismic engineering standards of the *San Francisco Building Code*. However, the project sponsor may be able to utilize the *State Historical Building Code* for certain aspects of the proposed project due to the architectural/historic significance of the Pacific Building. (See Mitigation Measures for the project's emergency response plan, page 141.) The project would rehabilitate the existing Pacific Building on the site, including the provision of seismic reinforcement, thus increasing the building's resistance to damage during an earthquake. The building was yellow-tagged in 1989 following the Loma Prieta earthquake.

The *Downtown Plan EIR* includes information on Seismic Safety issues in the C-3 District of Downtown. That information remains current. The *South of Market Plan EIR* provides similar information for that area, as does the *Mission Bay EIR* for its project area. These EIRs do not provide any new data about seismic issues that establish a need for revisions in the *Downtown Plan EIR* information or conclusions.

In summary, the Downtown & Vicinity, like other parts of San Francisco and the Bay Area, is subject to potentially large earthquakes from the San Andreas and Hayward faults. Relatively more of the land in Downtown & Vicinity is subject to violent groundshaking intensity than the rest of the City because the eastern edge of the area, including nearly all of Mission Bay, is built on filled land. Employment growth such as that expected in the proposed project, would result in larger numbers of persons being exposed in the future to earthquake hazards if a seismic event occurred during the work day. New buildings are subject to more stringent building and structural standards than are older buildings. Therefore, persons working (or residing) in buildings such as the proposed project would be relatively safer than those in some older existing buildings. However, during an earthquake, glass, and in some cases building cladding, is expected to endanger those on the streets and sidewalks. The bridges leading to/from San Francisco are expected to be closed for over three days due to damaged access ramps. The same would be true of the freeways heading south to the Peninsula. MUNI and CalTrain would be out of service for some time, and power outages would occur for at least one or two days. (*See Downtown Plan EIR* pp. IV.K.1-17a; *Mission Bay EIR*, Vol. II, pp. VI.K.11-15 and 33-43; *South of Market EIR*, pp. 154-174.)

A moderate earthquake with an estimated magnitude of 7.1 on the Richter Scale occurred in the Bay Area in October 1989. The earthquake lasted about 15 seconds and caused damage in the epicentral region in Santa Cruz, Watsonville, Hollister and Los Gatos. San Francisco and other areas, as far as 50 miles from the epicenter, were also damaged.

Casualties and damage were caused by falling objects, collapsed structures, fire and miscellaneous injuries (such as heart attacks). Most of the casualties and damage were a result of groundshaking which caused the Cypress structure of I-880 to collapse, as well as collapse of a section of the Bay Bridge which rendered it closed to traffic for one month. The Cypress structure has since been demolished. Other structural damage was incurred on the Embarcadero Freeway, which has been demolished, and portions of I-280 and U.S. 101 (a further description of the damage is provided on page 59). In addition, several masonry structures (including brick chimneys) failed. Wood-frame buildings were jolted off their foundations in areas near the epicenter as well as in San Francisco and other Bay Area cities.

Ground failure also occurred, most notably in the Santa Cruz area near the epicenter. Landslides resulted in road closures and damage to structures. Liquefaction and ground settlement occurred in places further from the epicenter (primarily, for example in the Marina District and the area south of Market Street in San Francisco, and the Oakland International Airport). Fires resulted from ruptured utility lines. The type of damage caused by the earthquake is typical of moderately sized earthquakes. Damage that occurred at distances up to 50 miles from the epicenter is evidence that the project area may be adversely affected by earthquakes occurring on any of the region's major faults.

Damage in the South of Market area was basically confined to buildings constructed prior to 1970. An earthquake of similar magnitude to (or larger than) the 1989 earthquake could occur again on the San Andreas, Hayward or Calaveras faults. The *Mission Bay EIR* analyzes seismic impacts for an 8.4 magnitude earthquake on the Richter Scale on the San Andreas Fault, a 6.9 magnitude on the

Hayward Fault, a 7.3 magnitude on the Calaveras Fault, and a 7.1 magnitude on the San Gregorio Fault and describes damage conditions that generally are greater than what were experienced in October 1989. Other active faults in the region could produce smaller earthquakes.

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1. URS/John A. Blume and Associates, *San Francisco Seismic Safety Investigation*, 1974. Groundshaking intensities that would result from a major earthquake were projected and classified on a five-point scale ranging from E (Weak) through A (Very Violent).

V. MITIGATION MEASURES PROPOSED TO MINIMIZE POTENTIAL ADVERSE IMPACTS OF THE PROJECT

In the course of project planning and design, measures have been identified that would reduce or eliminate potential environmental impacts of the proposed project. Some of these measures have been, or would be, voluntarily adopted by the project sponsor or project architects and contractors, and thus are proposed; some are under consideration. Implementation of some may be the responsibility of public agencies. Measures under consideration may be required by the City Planning Commission as conditions of project approval, if the project were to be approved. Each mitigation measure and its status is discussed below.

There are several items required by law which would serve to mitigate impacts and are summarized here for informational purposes. These measures include: no use of mirrored glass on the building to reduce glare, as per City Planning Commission Resolution 9212; provision of off-street bicycle storage pursuant to Section 155 of the *Planning Code*; provision of transportation brokerage service to coordinate a transportation management program pursuant to Section 163 of the *Planning Code*; priority use of off-street parking in the project for the physically handicapped, travellers in vanpools and carpools, and short-term trips, pursuant to Section 155 of the *Planning Code*; provision of building directories and signs for service elevators, located in the loading area; limitation of construction-related noise levels, pursuant to the San Francisco Noise Ordinance (Article 29 of the *San Francisco Police Code*, 1972).

State law requires that a reporting or monitoring program be adopted regarding mitigation measures that are made conditions of approval for any project which would otherwise have significant environmental impacts. As such, any alternative selected by the project sponsor and proposed to the City Planning Commission for approval will include a monitoring and/or reporting program to ensure compliance with all mitigation measures required as conditions of approval. The details of such a program, which could include activities by the project sponsor, the San Francisco Department of City Planning, other City agencies or outside consultants, will be included in the final presentation of the proposed project to the City Planning Commission.

Additional measures which are not required by legislation but which would also serve to mitigate environmental impacts appear below. Mitigation measures preceded by an asterisk (*) are from the Initial Study (see Appendix A, pages A-1-41).

CULTURAL RESOURCES

MEASURES PROPOSED AS PART OF THE PROJECT

* Should evidence of cultural or historic artifacts or features of potential significance be found during project excavation, the Environmental Review Officer (ERO) and the President of the Landmarks Preservation Advisory Board (LPAB) would be notified immediately, and any excavation which could damage such artifacts or features halted. The project sponsor would select an archaeologist to assist the Office of Environmental Review in determining the significance of the find. The archaeologist would prepare a report to be submitted to the ERO and the President of the LPAB containing an assessment of the potential significance of the find and recommendations for what measures should be implemented, including an appropriate security program, and a program for the preservation and recovery of any potential artifacts/features. The ERO would then recommend specific mitigation measures, including submittal of written reports to the ERO, if necessary.

* Excavation or construction activities which might damage discovered cultural resources would be suspended for a total maximum of four weeks over the course of construction to permit inspection, recommendation and retrieval, if appropriate.

* The archaeologist would prepare a draft report documenting the artifacts/features that were discovered, an evaluation as to their significance, and a description as to how any archaeological testing, exploration and/or recovery program was conducted. Copies of the draft reports prepared according to these mitigation measures would be sent first and directly to the Environmental Review Officer and to the President of the Landmarks Preservation Advisory Board for review. Following approval of the report by the ERO and the President of LPAB, a final report is to be sent to the California Archaeological Site Survey Office at Sonoma State University, the Foundation for San Francisco's Architectural Heritage and the State Office of Historic Preservation. The Office of Environmental Review shall receive three copies of the final archaeological findings report.

TRANSPORTATION

MEASURES PROPOSED AS PART OF THE PROJECT

During the construction period, construction truck movement would be minimized between 7:00 a.m. to 9:00 a.m. and 3:30 p.m. to 6:00 p.m. to minimize peak-hour traffic conflicts and to accommodate queuing of MUNI buses prior to the peak hours. The project sponsor and construction contractor would meet with the Traffic Engineering Division of the Department of Parking and Traffic, the Fire Department, MUNI and the Department of City Planning to determine feasible traffic mitigation measures to reduce traffic congestion during construction of this project and other nearby projects. To minimize cumulative traffic impacts due to lane closures during construction, the general contractor would coordinate with construction contractors for any concurrent nearby projects that are planned for construction or which later became known.

Secure bicycle storage facilities would be provided for project commuters and short-term visitors which would, at a minimum, provide safe shelter for seven bicycles, as required for the project (Section 155).

The project sponsor would, in consultation with the Municipal Railway, install eyebolts or make provisions for direct attachment of eyebolts for MUNI trolley wires on the proposed building wherever necessary. The sponsor may agree to waive the right to refuse the attachment of eyebolts to the proposed building if such attachment is done at City expense. (The Municipal Railway Five-Year Plans identify existing and proposed routes.) Prior to installation of any eyebolts on the historic Pacific Building, the project sponsor or MUNI shall consult with the Landmarks Preservation Advisory Board (LPAB).

When the building is 80% occupied, the sponsor shall conduct a survey, in accordance with methodology approved by the Department of City Planning, to assess actual trip generation patterns of project occupants and actual pick-up and drop-off areas for carpools and vanpools. The project sponsor would make this survey available to the Department of City Planning. This measure would provide needed information to aid in transportation planning within the City. Alternatively, at the request of the Department of City Planning, the sponsor would provide a fair and equitable in lieu contribution toward an overall transportation survey for the downtown area to be conducted by the Department of City Planning.

The project sponsor shall: 1) participate with other project sponsors and/or the San Francisco Parking Authority in undertaking studies of the feasibility of constructing an intercept commuter parking facility in a location appropriate for such facility to meet the unmet demand for parking for those trips generated by the project which cannot reasonably be made by transit, and 2) participate with other project sponsors and/or the Municipal Railway in studies of the feasibility of the establishment of a shuttle system serving the project site and the parking facility.

A member of the building management staff would be designated as a transportation broker to coordinate measures that are part of a transportation management program, such as: encouraging a flexible time system for employee working hours (to be developed by project tenants in consultation with the Department of City Planning) to reduce peak-period congestion by a planned spreading of employee arrivals and departures; encouraging transit use through the on-site sale of BART, MUNI, and other carriers' passes to employees; and encouraging employee carpool and vanpool systems in cooperation with RIDES for Bay Area Commuters by providing a central clearinghouse for carpool and vanpool information.

Off-street parking spaces would be controlled to assure priority for vehicles driven by the physically handicapped, and vanpool and carpool vehicles. All remaining parking spaces would be subject to rates that encourage short-term use of said spaces and discourage all-day parking; the parking rate would be reviewed and approved by the Department of City Planning, or alternatively, the project sponsor would agree to be bound by a formula, to be developed by the Department of City Planning, which structures rates so as to favor short-term parking.

Building directories and signs for the service elevators would be placed in the loading area.

The project would include warning devices (lighted signs and noise emitting devices) to alert pedestrians to vehicles exiting the structure. The Department of City Planning would make the final decision on installation of these devices.

The project truck loading exit ramp on Jessie Street shall be posted for left turns only; the garage exit ramp on Fourth Street shall be posted for right turns only.

The project sponsor would ensure that valet parking would not block van spaces or hinder service vehicles access to the basement.

The project sponsor would contribute funds to the City to provide traffic enforcement personnel to aid in the enforcement of existing traffic regulations, and to facilitate the flow of auto and transit traffic on Stockton, Fourth, Mission, Fifth, and Market Streets.

The placement of paving, landscaping or structures in the sidewalk area (subject to City approval) would be done in such a way as to minimize interference with pedestrian traffic.

CUMULATIVE

The City could implement the transportation improvements described in the Downtown Plan. Cumulative transportation impacts within San Francisco could influence transportation improvements recommended by the Plan for areas outside the City, regional cumulative impacts caused by downtown growth would also be reduced.

Coordinate work schedules of Pacific Gas and Electric Company and other utilities requiring trenching, so that street disruption would take place during weekends and off-peak hours. This should be done through the San Francisco Committee for Utility Liaison on Construction and Other Projects (CULCOP). In-street utilities could be installed at the same time as the street is opened for construction of the project to minimize street disruption.

The City could act upon or endorse the implementation of transportation mitigations described in the *Mission Bay EIR* Vol. II, Section VI.E, Mitigation, pp. VI.E.214-VI.E.217 for the year 2000 and VI.E.224-VI.E.231 for 2020, and in the *South of Market EIR*, pp. 189-194. The measures for the year 2000 include: constructing and maintaining rail rapid transit lines from downtown San Francisco to suburban corridors and major non-downtown centers in San Francisco; increased funding for Vehicle Acquisition Plans for San Francisco and regional transit agencies to expand existing non-rail transit service; providing exclusive transit lanes on City streets and on freeways; reducing incentives to drive by discouraging long-term parking; encouraging carpools, vanpools, and bicycle use; improving pedestrian circulation within downtown San Francisco; and providing transportation brokerage services. The *Mission Bay EIR* describes various types of measures to illustrate the magnitude of improvements needed to mitigate the impacts of regional growth in 2020.

Some of the implementing actions would require approval by decision-makers outside the City and County of San Francisco; many of the measures would require action by City agencies other than the City Planning Commission, such as the San Francisco Public Utilities Commission and/or Board of Supervisors. All except such things as providing transportation brokers would require funding from or approval by MTC. These measures are system-wide measures that must be implemented by public agencies. Other than project-specific measures such as the relevant transportation mitigation measures described above as part of the project, it is not appropriate to impose mitigation at system-wide levels on individual projects.

Many of the measures have been implemented since the *Downtown Plan EIR* was certified, such as BART's Oakland WYE track, expansion of the Sutter/Stockton parking garage, requiring transportation brokers in major new downtown buildings, and designation of Rincon Hill as a high density housing area near downtown in the Rincon Hill Plan. Others are under study and a few have changed. Studies are continuing of extending CalTrain downtown, extending BART in the East Bay, building a new Muni Metro turnaround at the foot of Market Street (a DEIS was published by UMTA in summer 1988), and constructing High Occupancy Vehicle (HOV) lanes on I-80 near the Bay Bridge. The majority of these measures are relevant on an area-wide, citywide or regional basis.

The *South of Market EIR* includes additional measures related to South of Market such as providing transportation brokerage services for new South of Market projects, as well as relevant measures for cumulative impacts similar to those in the Downtown Plan EIR.

Three types of mitigation measures related to cumulative impacts are described in the *Mission Bay EIR*; transportation system capacity improvements which are reasonably sure to happen by 2000 and are assumed in the impact analysis; measures to mitigate regional impacts by 2000; and measures to mitigate regional impacts by 2020. (See *Mission Bay EIR*, Vol.II,pp.VI.E.198-231.)

Measures are proposed in the *Mission Bay EIR* to mitigate the impacts of regional growth in 2020. Those measures include expanding transbay transportation capacity to the East Bay by constructing a new bridge between Alameda and San Mateo Counties, widening the San Francisco-Oakland Bay Bridge or Hayward-San Mateo Bridge, or providing a new transbay tunnel or an enhanced train-control computer system for BART, expanded transbay capacity to the North Bay through provision of bus lanes or light-rail service on a second deck of the Golden Gate Bridge, and expanded transit opportunities to the South Bay via a CalTrain extension to downtown San Francisco or BART and Muni extensions to the Peninsula.

AIR QUALITY

MEASURES PROPOSED AS PART OF THE PROJECT

* The project sponsor would require the general contractor to sprinkle demolition sites with water continually during demolition activity; sprinkle unpaved construction areas with water at least twice per day to reduce dust generation by about 50 percent; cover stockpiles of soil, sand and other such material; cover trucks hauling debris, soil, sand or other such materials; and sweep streets surrounding demolition and construction sites at least once per day to

reduce particulate emissions. The project sponsor would require that the general contractor obtain reclaimed water from the Clean Water Enterprise for this purpose, as required under City of San Francisco Ordinance No. 175-91. The project sponsor would require the general contractor to maintain and operate construction equipment so as to minimize exhaust emissions of particulate and other pollutants, by such means as prohibition of idling motors when equipment is not in use or when trucks are waiting in queues, and implementation of specific maintenance programs (to reduce emissions) for equipment that would be in frequent use for much of the construction period.

Provisions contained in Section 163 of the *City Planning Code*, requiring the project to institute a transportation management program and provide on-site transportation brokerage services (for the office portion of the project), also would reduce air quality impacts of the project.

GEOLOGY/SEISMICITY

MEASURES PROPOSED AS PART OF THE PROJECT

* A detailed foundation and structural design study would be conducted for the building by a California-licensed geotechnical engineer. The project sponsor would follow the recommendations of these studies during the final design, excavation and construction of the project.

If dewatering were necessary, any groundwater pumped from the site would be retained in a holding tank to allow suspended particles to settle, if this is found necessary by the Industrial Waste Division of the Department of Public Works, to reduce the amount of sediment entering the storm drain/sewer lines.

The project sponsor would require the general contractor to install and maintain sediment traps in local stormwater intakes during the construction period to reduce the amount of sediment entering the storm drain/sewer lines, if this is found necessary by the Industrial Waste Division of the Department of Public Works.

Should dewatering be necessary, the final soils report would address the potential settlement and subsidence impacts of this dewatering. Based upon this discussion, the soils report would contain a determination as to whether or not a lateral and settlement survey should be done to monitor any movement or settlement of surrounding buildings and adjacent streets. If a monitoring survey is recommended, the Department of Public Works would require that a Special Inspector (as defined in Article 3 of the *Building Code*) be retained by the project sponsor to perform this monitoring. Groundwater observation wells would be installed to monitor the level of the water table and potential settlement and subsidence. If, in the judgment of the Special Inspector, unacceptable subsidence were to occur during construction, groundwater recharge would be used to halt this settlement. The project sponsor would delay construction if necessary. Cost for the survey and any necessary repairs to service under the street would be borne by the project sponsor.

If dewatering is undertaken for the project, the groundwater level in the site vicinity would be monitored. If lowering of the groundwater table were to threaten wooden pile foundations, groundwater recharge would be used to stabilize the groundwater level. The final soils report would address whether or not watering of piles of adjacent structures was necessary. If judged necessary, the project sponsor would ensure the prime contract specified general contractor compliance.

WATER QUALITY

See the second measure under Geology/Seismicity, above, for mitigation proposed to prevent sediment from entering storm sewers.

HAZARDS

MEASURES PROPOSED AS PART OF THE PROJECT

* An evacuation and emergency response plan would be developed by the project sponsor or building management staff, in consultation with the Mayor's Office of Emergency Services, to ensure coordination between the City's emergency planning activities and the project's plan, and to provide for building occupants in the event of an emergency. The project's plan would be reviewed by the Office of Emergency Services and implemented by building management insofar as feasible before issuance of final building permits by the Department of Public Works.

* To expedite implementation of the City's emergency response plan, the project sponsor would prominently post information for building occupants concerning what to do in the event of a disaster.

* A preliminary inspection of the existing buildings for asbestos has been made, and a final report will be prepared. Included in the final report would be a plan for the safe removal and disposal of any asbestos found in the buildings exceeding allowable levels under applicable State law. A copy of this report would be submitted to the Bay Area Air Quality Management District (BAAQMD), and any other appropriate State agency, and evidence of this submittal transmitted to the Department of City Planning before the commencement of asbestos abatement. The project sponsor would comply with applicable State law regulating asbestos removal and disposal.

VI. SIGNIFICANT ENVIRONMENTAL EFFECTS THAT CANNOT BE AVOIDED IF THE PROPOSED PROJECT IS IMPLEMENTED

In accordance with Section 21067 of the California Environmental Quality Act (CEQA), and with Section 15040, 15081 and 15082 of the State CEQA Guidelines, the purpose of this chapter is to identify impacts that could not be eliminated or reduced to an insignificant level by mitigation measures included as part of the proposed project, or by other mitigation measures that could be implemented, as described in Chapter V., Mitigation Measures, pages 135-141.

The findings of significant impacts are subject to final determination by the City Planning Commission as part of its certification process for the EIR. This chapter in the Final EIR will be revised, if necessary, to reflect the City Planning Commission's findings. If the City Planning Commission finds that there would be a significant impact, then all approving bodies would be required to make formal findings of overriding consideration indicating how the benefits of the project outweigh its potential significant environmental effects.

Level of Service (LOS) D (Volume to Capacity (V/C) ratio 0.81–0.90) represents traffic operations at signalized intersections within the acceptable LOS range. LOS E (V/C ratio 0.91–1.00) represents intersection capacity and is not within the acceptable LOS range. A proposed project would have a significant impact on a signalized intersection if it resulted in a deterioration in LOS from LOS D or better to LOS E or worse, or caused an LOS E or LOS F condition to deteriorate substantially. Traffic increases resulting from the proposed project would cause 16 instances of significant peak hour level of service deterioration at four of the six study intersections, with six occurring under existing plus project conditions and 10 occurring under cumulative conditions (see Tables 4 and 10, pages 105 and 152). None of these instances could be mitigated to a less than significant level, and are therefore considered unavoidable significant impacts of the proposed project. (Table 10, page 152, compares the times and locations of significant unavoidable impacts on local intersections which would result from the proposed project, with those which would result from Alternatives C and D.)

Cumulative development in the Greater Downtown and Vicinity in San Francisco (which includes the project site) would have a significant effect on the environment in that it would contribute to cumulative traffic increases as well as cumulative passenger loadings on MUNI, BART and other regional transit carriers.

In the year 2000, vehicle trips generated by the proposed project itself would generate emissions of NO_x and particulates in excess of 150 lbs/day, considered a significant air quality impact by the Bay Area Air Quality Management District (BAAQMD).

The project, if occupied, would increase the daytime population on the site that would be subject to substantial danger during a major earthquake above existing conditions. Although the Pacific II building meets the most current building and seismic engineering requirements of the *San Francisco Building Code*, the new Pacific III building would meet these requirements, and the 1907 Pacific Building would be seismically reinforced, greater concentrations of people would be susceptible to injury. Such population also would contribute to congestion which, along with debris in the streets, would impede the access of emergency services responding to fire and other earthquake-related emergencies.

VII. ALTERNATIVES TO THE PROPOSED PROJECT

This chapter identifies alternatives to the proposed project, discusses environmental impacts associated with these alternatives, and gives the reasons the alternatives were rejected in favor of the project. Regardless of the sponsor's reasons for rejection, the City Planning Commission could approve an alternative instead of the proposed project if the Commission believed the alternative would be more appropriate for the site.

No alternative site analysis was conducted for this EIR for a number of reasons. Between 1979 and 1985, the City of San Francisco engaged in a lengthy and expensive planning and environmental review process to evaluate and promulgate new controls for development in its Downtown office core, the C-3 districts. Adoption of the *Downtown Plan* by the Commission in 1984 and of the implementing zoning ordinance by the Board of Supervisors in 1985 represented a fine-tuned effort to control and direct growth so as to preserve the Downtown as a vital commercial and retail center and to enhance the economic vitality of the City, as well as to balance the environmental need of the City as a whole. As a part of this effort, the Board of Supervisors, through legislation, adopted a package of mitigation measures that would address the cumulative effects of downtown office growth, including impacts on housing, transportation, open space, childcare, and preservation of architecturally significant buildings. Location of the proposed project at the proposed site is consistent with and furthers the goals of the *Downtown Plan*. There are no other sites within the Downtown area where this project would not contribute to the cumulative impacts of retail/office development. The EIR would find the same level of contribution to the cumulative impacts irrespective of any other Downtown location in which the project site may be located.

Additionally, one of the primary objectives of the project sponsor is the rehabilitation/reuse of the Category I-Significant Pacific Building on the site. This objective could not be satisfied by an alternate site project.

Finally, the project sponsor is a private entity which does not own or control other comparable sites in San Francisco.

For the above reasons, no alternative site analysis has been included in this EIR.

A. ALTERNATIVE A: NO PROJECT

DESCRIPTION

This alternative would entail no change to the project site. The proposed project would not be built. The Pacific Building (Pacific I), the 22 Fourth Street building (Pacific II) and the loading and parking area at Jessie Street (Pacific III) would be retained but not altered. Under this alternative, the Pacific Building, which suffered damage in the 1989 Loma Prieta earthquake and was yellow-tagged (limited access, dangerous conditions believed to be present) by the San Francisco Bureau of Building Inspection, would not undergo seismic reinforcement. In addition, the historic facades of the Pacific Building (identified as a Category I-Significant building in the *Downtown Plan*) would not undergo architectural restoration. Protective scaffolding located on sidewalks adjacent to Pacific I would remain in place indefinitely.

A variant of this alternative would involve no new construction at the site, but would include seismic reinforcement of the Pacific Building.

IMPACTS

If the No Project Alternative were implemented, none of the impacts associated with the project would occur. The environmental characteristics of this alternative would generally be as described in the Environmental Setting sections of this report (see Chapter III, Environmental Setting, pages 39 to 68, for a discussion of existing conditions). Transportation, noise and air quality impacts associated with construction of the project would not occur. Transportation and air quality conditions (as described in Chapter IV, Environmental Impacts, pages 69-134) as base conditions with cumulative development, but without the project, would continue to exist around the site. There would be no change in energy demand on the site. Employment on the site would not increase as it would with the project. Land uses, site views, shadows and winds would not change. This alternative would contribute to cumulative impacts on transportation at local intersections and to additional air quality impacts in as much as the existing retail, office and parking uses of the site would continue. However, the magnitude of impact would be less than that generated by the project. This alternative would not contribute to growth inducement in areas surrounding the project site. The facades of the Pacific Building on the site would not be architecturally restored, and protective scaffolding would continue to reduce effective sidewalk widths adjacent to Pacific I and contribute to pedestrian congestion, especially along the narrower Fourth Street sidewalk. Depending upon which variation of the No Project Alternative were implemented, the Pacific Building (Pacific I) would either remain in its existing damaged condition, or undergo seismic reinforcement. This alternative would preserve the option to develop a similar or different type of building on the site in the future, so seismic impacts would potentially be greater for this alternative than for the proposed project.

STATUS OF THIS ALTERNATIVE

This alternative was rejected by the project sponsor because it would not satisfy the sponsor's objectives of developing a "high-end" retail mixed-use project in close proximity to Union Square or rehabilitating an historically significant Downtown building; it would also not use the development potential of the site allowable under the *Downtown Plan*: it would not use Transferable Development Rights (TDR) which promote preservation and restoration of historic buildings in the C-3 District; and it would not further policies of the *Downtown Plan* concerning the location of development.

B. ALTERNATIVE B: ALTERNATE MIX PROJECT

DESCRIPTION

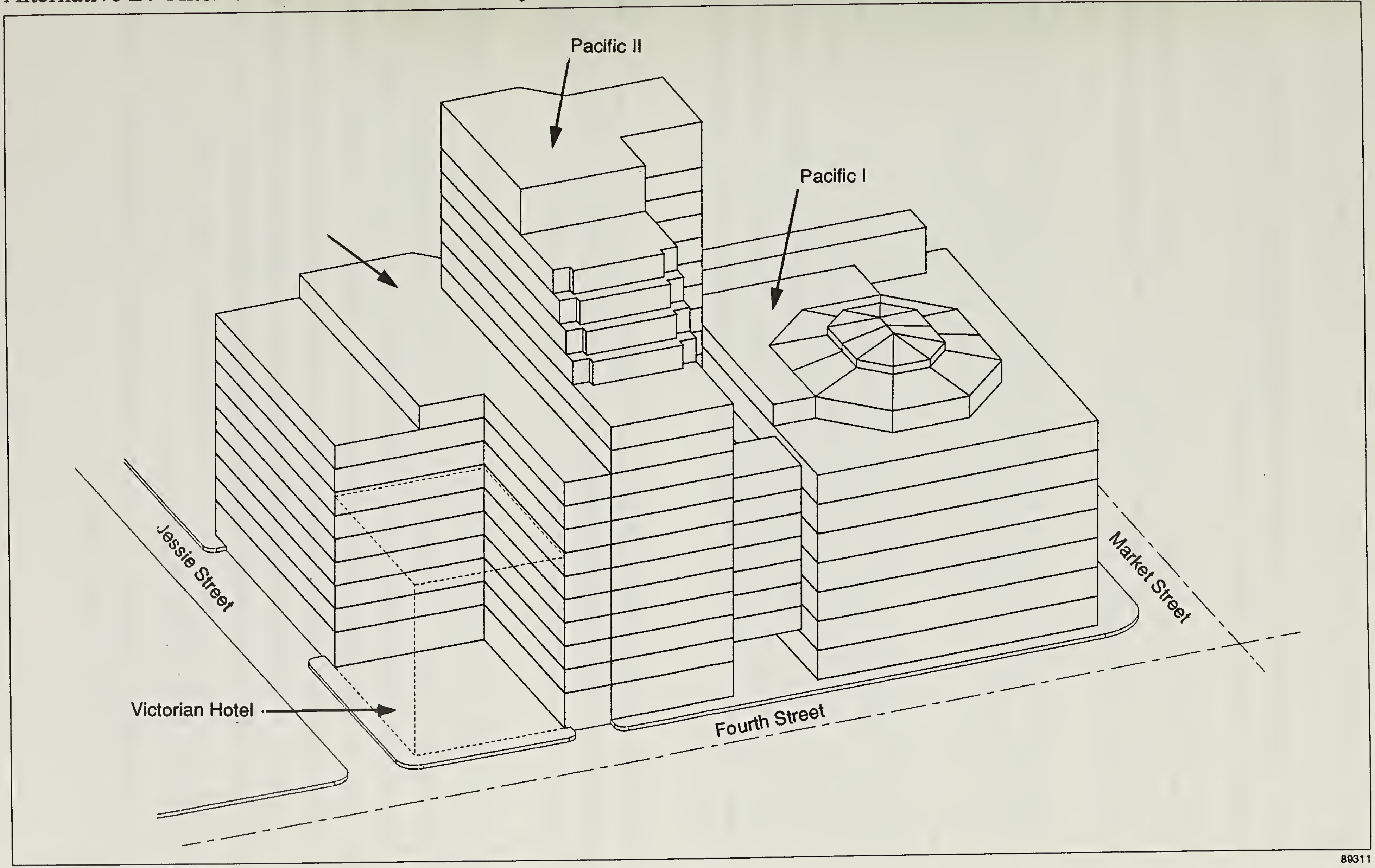
The project as proposed would include about 477,000 sq. ft. of retail space, about 108,000 sq. ft. of office space, about 98,000 sq. ft. of parking/loading/mechanical space, and about 19,000 sq. ft. of public open space, for a total development of about 702,000 sq. ft. This alternative considers a project with approximately the same total gross square footage as the proposed project, but in an alternate mix which would include less retail space and more office space. This alternative would contain about 231,000 sq. ft. of retail space, 378,000 sq. ft. of office space, and approximately the same amount of parking/loading/mechanical and open space as the proposed project (see Figure 25, page 147).

IMPACTS

The building envelope of this alternative would be the same as with the proposed project. Therefore, the following effects (described in Chapter IV. Environmental Impacts, pages 69 to 134) would be the same as with the project: visibility of this alternative in near-, mid- and long-range views; wind speeds on sidewalks adjacent to the site; additional shadows on streets and sidewalks; and the relationship of the alternative to the existing urban design context. Architectural restoration and seismic reinforcement of the Pacific Building facades would be the same as under the proposed

Pacific Center
Alternative B: Alternate Mix - Axonometric Projection

Figure 25



SOURCE: WHISLER-PATRI ARCHITECTS.

project. Construction noise and construction air quality impacts for this alternative would be the same as with the proposed project, as the construction duration would be about the same.

The overall FAR of this alternative would be 9:1 (the same as the proposed project), which would be achieved by the use of approximately 80,000 sq. ft. of transferable development rights (TDR), obtained from as-yet unidentified lots in the C-3 district.

The proposed project would generate peak hour vehicle trips (with auto occupancy rates factored in) as follows: about 905 during a typical weekday P.M. peak hour (5:00-6:00 p.m.), 1,790 during a typical weekend midday peak hour (12:00-1:00 p.m.), 1,230 during a holiday (Thanksgiving to Christmas) weekday P.M. peak hour, and 2,885 during a holiday weekend midday peak hour. This alternative would generate fewer overall vehicle trips than the proposed project. There would be approximately 560 typical weekday P.M. peak hour trips, 960 typical weekend midday peak hour trips, 765 holiday weekday P.M. peak hour trips, and 1,570 holiday weekend midday peak hour trips from this alternative. Consequently, traffic and air quality effects on local intersections and anticipated parking demand would be correspondingly lower under this alternative. Traffic impacts on local intersections under this alternative would be comparable to those described for Alternative C, discussed below on pages 151-152.

This alternative would accommodate about 2,110 workers on site (310 more than the project), consisting of about 660 retail workers (690 less than the project), 1,400 office workers (1,000 more than the project), and about 50 parking, security and maintenance workers (the same as the project).

As part of approving and implementing the *Downtown Plan* and implementation ordinances, the Board of Supervisors also established a limit on the amount of office space that could be approved in San Francisco (*City Planning Code* Sections 320-324), which was further modified following voter approval of San Francisco's Proposition M in 1986. The "annual limit" in effect establishes a policy that some regional office demand be accommodated in San Francisco but that some also be accommodated elsewhere in the region on sites outside San Francisco. This alternative would not be subject to the requirements of *City Planning Code* Sections 320-324 because, like the proposed project, there would be an overall reduction in existing office space on the site.

STATUS OF THIS ALTERNATIVE

This alternative has been rejected by the project sponsor because it would not contain the amount of retail space they are seeking to develop.

C. ALTERNATIVE C: SMALLER PROJECT

DESCRIPTION

The project as proposed would include the transfer of about 80,000 sq. ft. of development rights (TDR) from as-yet unidentified sites in the C-3 district. This alternative considers a smaller project with the same types of uses as the proposed project, but without TDR. The FAR of this alternative would be about 6:1, compared to 9:1 for the project. This alternative would contain about 231,000 sq. ft. of retail space, 296,000 sq. ft. of office space, 18,000 sq. ft. of open space, and about 75,000 sq. ft. of parking, loading, and mechanical space, for a total development of 623,000 gross sq. ft., compared to 702,000 gross sq. ft. for the project (see Figure 26, page 150).

As with the project, the Pacific Building facades would undergo seismic reinforcement and architectural restoration. Unlike the proposed project, however, the Pacific Building interior and the 22 Fourth Street building interior would not be demolished, and an integrated floorplate design would not be constructed. The Pacific I and II buildings would remain as independent structures, and the internal structure of Pacific I, which was damaged in the 1989 Loma Prieta earthquake, would be seismically reinforced.

Under this alternative, the Pacific III portion of the site would contain a four- to six-story structure connected to Pacific II, compared to the project which would develop a ten-story structure in this location.

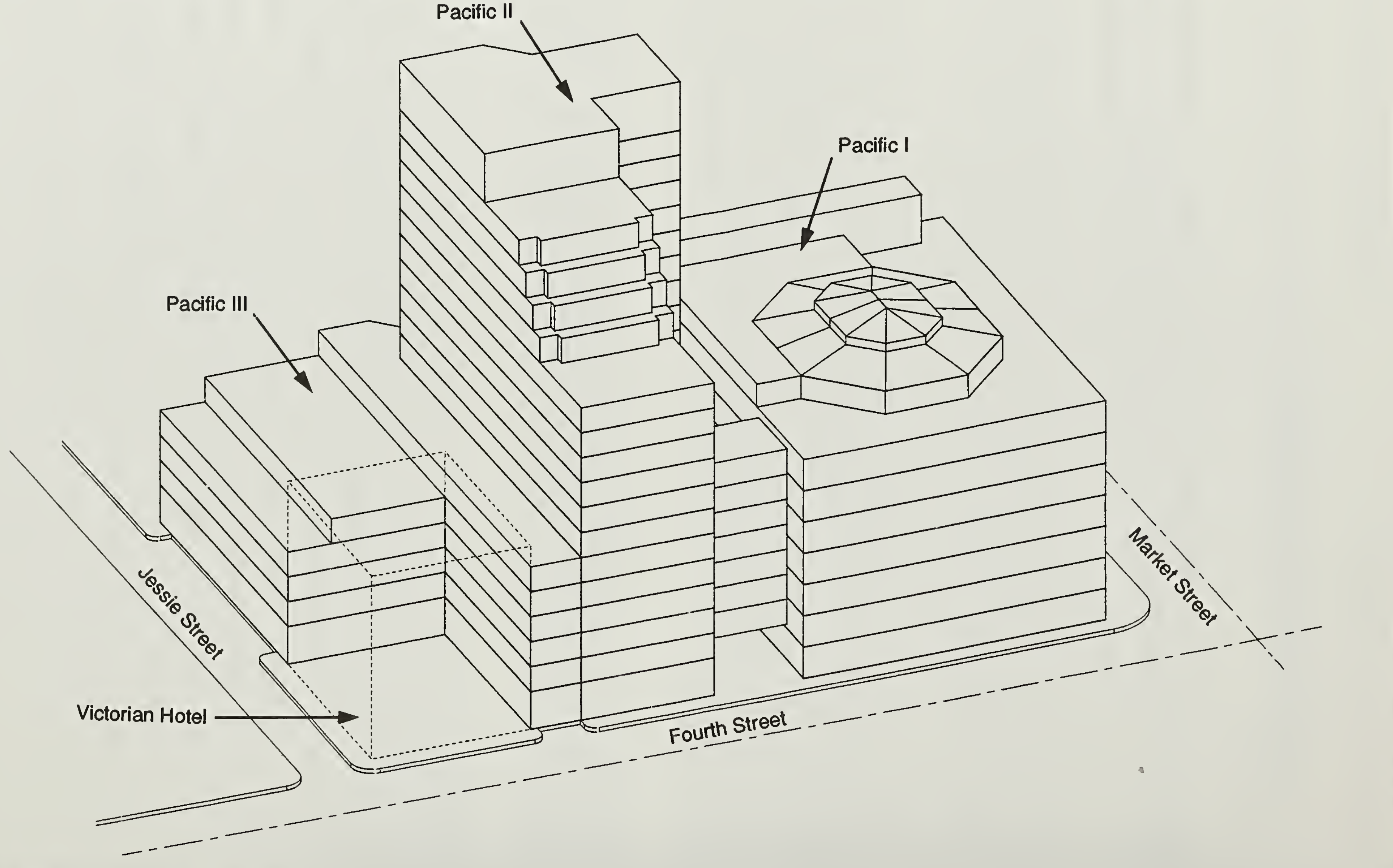
IMPACTS

The building envelope of the Pacific I and II portions of this alternative would be the same as with the proposed project, and the Pacific III portion would be smaller than under the proposed project. Therefore, the effects of wind speeds on sidewalks adjacent to the site (described in Chapter IV. Environmental Impacts) would be approximately the same as with the project. Architectural restoration and seismic reinforcement of the Pacific Building facades would also be the same under this alternative as under the proposed project, and consequently, impacts associated with these topic areas would be the same. Because this alternative would not replace the internal structure of Pacific I, seismic reinforcement of the entire structure (rather than of the facades only) would occur.

Pacific Center

Alternative C: Smaller Project - Axonometric Projection

Figure 26



SOURCE: WHISLER-PATRI ARCHITECTS.

Visibility of this alternative in near-, mid- and long-range views would be generally similar to the proposed project. Existing views of the Pacific III portion of the site are blocked by intervening buildings from most vantages. Whether a ten-story structure were constructed in this location (as under the proposed project), or a four- to six-story structure were constructed there (as under this alternative), the structure would only be visible from Jessie and Fourth Streets adjacent to the site, and from some nearby buildings. The shorter height of the Pacific III portion of the project under this alternative would consequently result in a less confined pedestrian experience along the eastern end of Jessie Street, as compared to the proposed project. Additionally, shading of the west facade of the Victorian Hotel would be reduced under this alternative, relative to the proposed project.

The duration of the construction period would be about 18-20 months, compared to 24-28 months under the proposed project. Consequently, construction noise and construction air quality impacts for this alternative would occur for a correspondingly shorter duration.

The proposed project would generate peak hour vehicle trips (with auto occupancy rates factored in) as follows: about 905 during a typical weekday P.M. peak hour (5:00-6:00 p.m.), 1,790 during a typical weekend midday peak hour (12:00-1:00 p.m.), 1,230 during a holiday (Thanksgiving to Christmas) weekday P.M. peak hour, and 2,885 during a holiday weekend midday peak hour. This alternative would generate fewer overall vehicle trips than the proposed project. There would be approximately 550 typical weekday P.M. peak hour trips, 965 typical weekend midday peak hour trips, 735 holiday weekday P.M. peak hour trips, and 1,580 holiday weekend midday peak hour trips from this alternative. Consequently, traffic and air quality effects on local intersections and anticipated parking demand would be correspondingly lower under this alternative.

As discussed in Chapter IV.D, Transportation, and Chapter VI, Significant Environmental Effects that Cannot be Avoided if the Proposed Project is Implemented, the proposed project would result in 16 instances of significant and unavoidable deterioration in Level of Service (LOS) at four of the six study intersections.[1] This alternative would result in nine instances of significant and unavoidable LOS deterioration; the times and locations of these impacts, as well as those of the proposed project and Alternative D, are shown in Table 10, page 152.

TABLE 10

SUMMARY COMPARISON OF TIMES AND LOCATIONS OF SIGNIFICANT AND UNAVOIDABLE IMPACTS TO LOCAL INTERSECTIONS: PROPOSED PROJECT AND ALTERNATIVES C AND D[1]

	Typical Weekday PM Peak Hour		Typical Weekend Midday Peak Hour		Holiday Weekday PM Peak Hour		Holiday Weekend Midday Peak Hour	
Intersection	EP	C	EP	C	EP	C	EP	C
Fourth/Market							I	I
Fifth/Market			I	I/II/III		I/III	I	I/III
Fourth/Mission		I/II/III						I
Fifth/Mission	I/II/III	I/II/III		I/II/III	I/II/III	I/II/III	I/II/III	I/II/III
Stockton/O'Farrell								
Fourth/Harrison								

Notes: EP = Existing plus project conditions; C = Cumulative year 2000 conditions (plus project). Instances of significant and unavoidable impacts to local intersection Level of Service (LOS) would occur with implementation of the proposed project (I), Alternative C (II), and Alternative D (III) at the times and locations shown in the table.

Source: EIP Associates; Korve Engineering, Inc.

This alternative would result in a decreased project generated public transit ridership compared to the proposed project. However, the MUNI routes and Eastbay bound BART lines, projected to operate at LOS D or worse, would experience additional overcrowding over existing conditions.

The reduction in vehicle trips generated by this alternative would result in a corresponding reduction in persons walking from the off-street parking facilities in the study area to the proposed project site. This alternative would have reduced pedestrian impacts, compared to the proposed project, on the southwest and northwest corners of the Fourth Street/Mission Street intersection, the southeast corner at the Fifth Street/Mission Street intersection, the southwest and northwest corners at the Stockton Street/O'Farrell Street intersection, and on the west side of Fourth Street between Market and Mission Streets.

This alternative would accommodate about 1,800 workers on the site (the same as the project), consisting of about 660 retail workers (690 less than the project), 1,100 office workers (700 more than the project), and about 40 parking, security and maintenance workers (10 less than the proposed project).

STATUS OF THIS ALTERNATIVE

The project sponsor has rejected this alternative because, in the sponsor's opinion, it would not provide for the full use of the development potential permitted under the *City Planning Code*, and it would not use TDRs which promote preservation and restoration of historic buildings in the C-3 District. It also would not contain the amount of retail space the sponsor is seeking to develop.

D. ALTERNATIVE D: UNDERGROUND TRANSIT CONNECTION

DESCRIPTION

This alternative would have the same types and amounts of uses as the proposed project, but would include an underground connection to the Powell Street BART/MUNI transit station. The connection would be similar to existing underground connections between the Powell Street Station and the San Francisco Shopping Centre, located at Market and Fifth Streets, and the Woolworth Store, located at Market and Powell Streets (see Figure 27, page 154).

IMPACTS

This alternative would have the same environmental effects as the proposed project (described in Chapter IV. Environmental Impacts, pages 69 to 134), except for those related to Transportation and Air Quality.

By including a direct underground connection to the Powell Street BART/MUNI transit station, this alternative would provide an added incentive to use public transit over other modes of transportation.[2] This alternative would affect project-generated pedestrian travel by reducing the auto person trips and increasing the number of public transit trips through the Powell Street BART/MUNI transit station. Table 11, page 155, summarizes the comparison of select person trips by mode. The transportation study prepared for this project converted the person trips for each alternative into vehicle trips, for comparison with the number of vehicle trips generated by the proposed project.

Pacific Center

Alternative D: Underground Transit Connection - Floor Plan and Section Figure 27

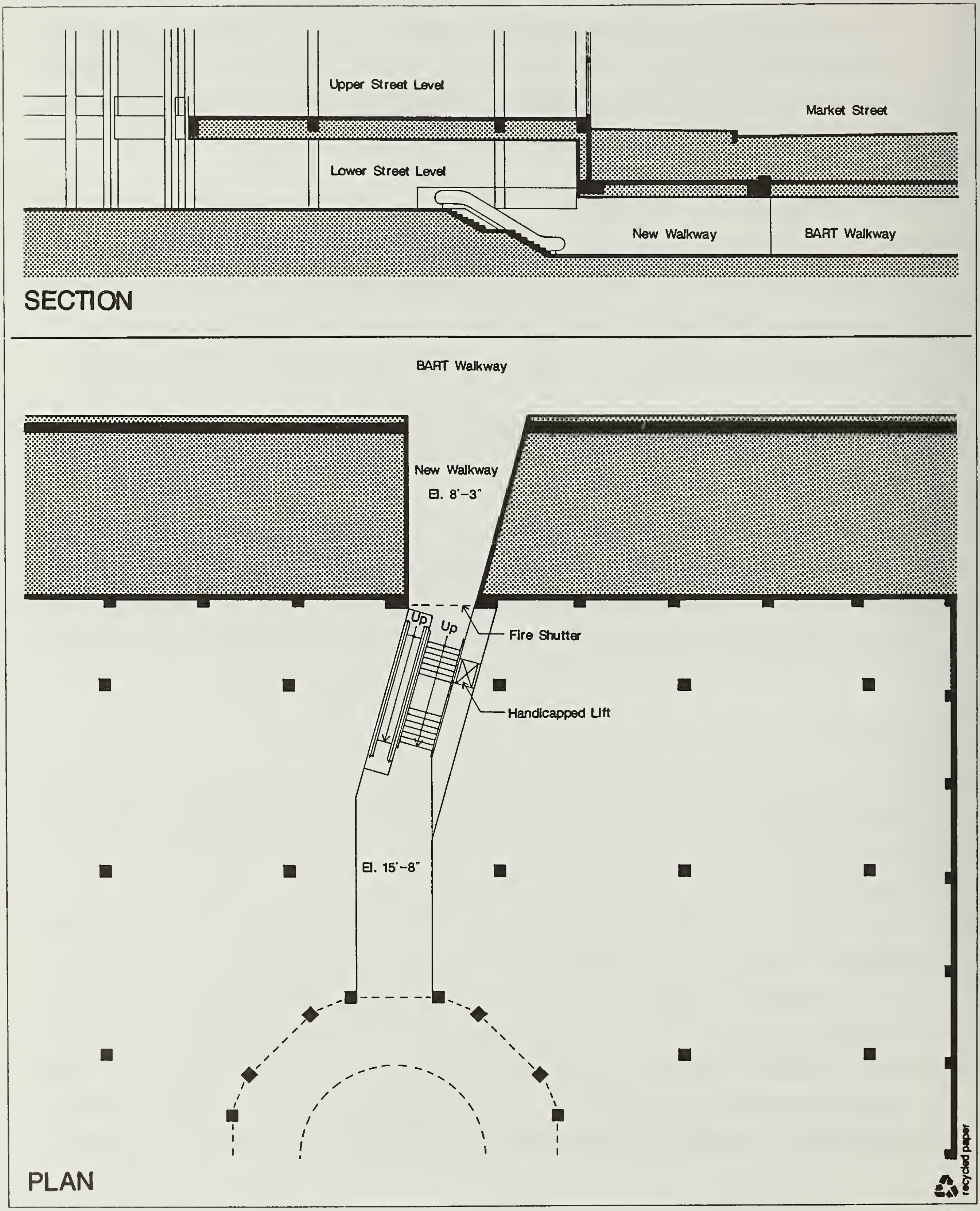


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TABLE 11

SUMMARY COMPARISON OF SELECT PEAK HOUR PERSON TRIPS BY MODE: PROPOSED PROJECT AND ALTERNATIVE D

	Typical Weekday Midday	Typical Weekday PM	Typical Weekend Midday[1]	Holiday Weekday Midday	Holiday Weekday PM	Holiday Weekend Midday[1]
Proposed Project - Auto[2]	1,630	1,408	2,867	2,167	2,135	6,626
Alternative D - Auto[2]	1,388	1,273	2,622	2,176	1,992	6,206
Proposed Project - Taxi[3]	8	43	198	90	130	246
Alternative D - Taxi[3]	2	41	145	109	122	257
Proposed Project - MUNI	823	963	1,191	1,366	1,303	2,295
Alternative D - MUNI	1,048	1,126	1,769	1,721	1,679	2,777
Proposed Project - BART	1,034	635	882	968	459	2,249
Alternative D - BART	1,275	1,126	1,769	1,028	423	3,030

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1. No office trips generated on the weekend.
2. Auto vehicle occupancy rates vary by origin of trip and analysis scenario, ranging from a low of 1.2 to a high of 2.7 (see Appendix C, Tables C-5 and C-6, for a summary of the project mode splits).
3. Taxi occupancy rates vary by origin of trip and analysis scenario, ranging from a low of 1.2 to a high of 3.0 (see Appendix C, Tables C-5 and C-6, for a summary of project mode splits).

Source: Korve Engineering, Inc.

The proposed project would generate peak hour vehicle trips (with auto occupancy rates factored in) as follows: about 905 during a typical weekday P.M. peak hour (5:00-6:00 p.m.), 1,790 during a typical weekend midday peak hour (12:00-1:00 p.m.), 1,230 during a holiday (Thanksgiving to Christmas) weekday P.M. peak hour, and 2,885 during a holiday weekend midday peak hour. This alternative would generate fewer overall vehicle trips than the proposed project. There would be approximately 780 typical weekday P.M. peak hour trips, 1,480 typical weekend midday peak hour trips, 1,060 holiday weekday P.M. peak hour trips, and 2,305 holiday weekend midday peak hour trips from this alternative. Consequently, traffic and air quality effects on local intersections and anticipated parking demand would be correspondingly lower under this alternative.

This alternative would divert person trips from the auto and taxi modes to the public transit mode on a typical weekday and holiday weekday, thereby reducing the traffic impacts at the intersections of Fourth Street/Market Street, Fifth Street/Market Street, Fourth Street/Mission Street, Fifth

Street/Mission Street, and Stockton Street/O'Farrell Street. As discussed in Chapter IV.D, Transportation, and Chapter VI, Significant Environmental Effects that Cannot be Avoided if the Proposed Project is Implemented, the proposed project would result in 16 instances of significant and unavoidable deterioration in Level of Service (LOS) at four of the six study intersections. This alternative would result in 11 instances of significant and unavoidable LOS deterioration; the times and locations of these impacts, as well as those of the proposed project and Alternative C, are shown in Table 10, page 152.

The reduction in vehicle trips would result in a corresponding reduction in persons walking from the off-street parking facilities in the study area to the proposed project site. Therefore, the projected person trip diversions would reduce the pedestrian impacts on the southwest and northwest corners of the Fourth Street/Mission Street intersection, the southeast corner of the Fifth Street/Mission Street intersection, the southwest and northwest corners of the Stockton Street/O'Farrell Street intersection, and on the west side of Fourth Street between Market and Mission Streets.

This alternative would, however, increase public transit ridership over the projected levels discussed in Chapter IV.D. Transportation. The MUNI routes and East Bay-bound BART lines, projected to operate at LOS D or worse, would experience additional overcrowding in the cumulative year.

STATUS OF THIS ALTERNATIVE

The project sponsor has indicated that this alternative is still under consideration.

E. ALTERNATIVE E: ALTERNATE USE PROJECT

DESCRIPTION

This alternative considers a project with approximately the same total gross square footage as the proposed project, but with an alternate mix of uses that would include retail, office and movie theaters. There would be about 469,000 sq. ft. of retail space, about 81,000 sq. ft. of office space, about 42,000 sq. ft. of movie theater space (seven to ten theaters with a total seating capacity of about 1,600), and the same amount of parking/loading/mechanical space and open space as the proposed project. The total gross square footage of this alternative would be about 684,000 sq. ft., about 17,000 sq. ft. less than the proposed project; this difference is due to the higher ceilings and reduced floor area resulting from the theater design. This alternative would otherwise include the same elements as the proposed project: architectural restoration and seismic reinforcement of the Pacific Building facades; demolition and reconstruction of the Pacific I and II interiors; and construction of a new building (Pacific III) between Pacific II and Jessie Street.

The movie theaters would be located on the uppermost floor of Pacific III, and would operate from about 11:00 a.m. to about 10:30 p.m., seven days a week. Access to the movie theaters would be from within the center.

IMPACTS

This alternative would have the same environmental effects as the proposed project (described in Chapter IV. Environmental Impacts, pages 69 to 134), except for those related to Transportation, Employment and Air Quality.

The proposed project would generate peak hour vehicle trips (with auto occupancy rates factored in) as follows: about 905 during a typical weekday P.M. peak hour (5:00-6:00 p.m.), 1,790 during a typical weekend midday peak hour (12:00-1:00 p.m.), 1,230 during a holiday (Thanksgiving to Christmas) weekday P.M. peak hour, and 2,885 during a holiday weekend midday peak hour. This alternative would generate more overall vehicle trips than the proposed project. There would be approximately 1,430 typical weekday P.M. peak hour trips, 1,790 typical weekend midday peak hour trips, 1,760 holiday weekday P.M. peak hour trips, and 2,930 holiday weekend midday peak hour trips from this alternative. Consequently, traffic and air quality effects on local intersections and anticipated parking demand would be correspondingly greater under this alternative.

This alternative would accommodate about 1,750-1,800 workers on the site (up to 50 less than the project), consisting of about 1,340 retail workers (10 less than the project), 300 office workers (100 less than the project), about 70-110 theater workers and about 50 parking, security and maintenance workers (the same as the proposed project).[3]

STATUS OF THIS ALTERNATIVE

The project sponsor has indicated that this alternative is still under consideration.

F. ALTERNATIVE F: PEDESTRIAN BRIDGE

DESCRIPTION

This alternative would have the same types and amounts of uses as the proposed project, but would include a pedestrian bridge over Jessie and Mission Streets, connecting the Pacific Center to a planned expansion of the Fifth and Mission Parking Garage (see Figure 28, page 159).[4] The pedestrian bridge would cross both streets at a height of about 60 ft., approximately 50 ft. west of Fourth Street. The pedestrian bridge would be approximately eight ft. wide and 10 ft. from top to bottom, enclosed with large windows on the east and west sides, and clad in light-colored exterior materials.

Figure 29, page 160, is a photomontage of the view looking west down Mission Street from the east side of Fourth Street; Figure 30, page 161, is a photomontage of the view looking east down Mission Street from the west side of Fifth Street.

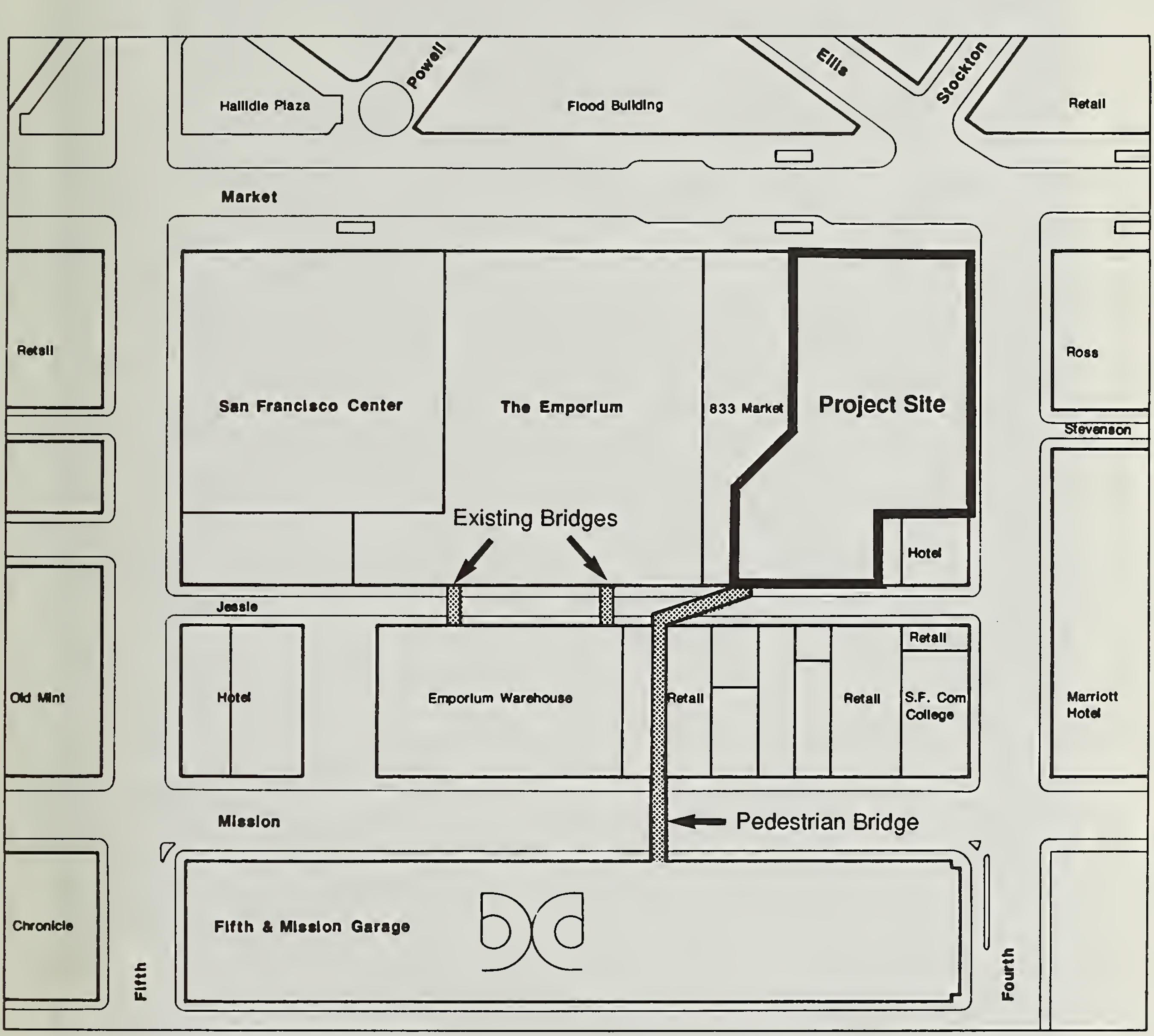
IMPACTS

This alternative would have the same environmental effects as the proposed project (described in Chapter IV. Environmental Impacts, pages 69 to 134), except for those related to Transportation, Urban Design and Visual Quality and Shadows.

By including a direct pedestrian connection to the Fifth and Mission Parking Garage, this alternative would alter the project-generated pedestrian travel patterns by diverting pedestrians from the surrounding sidewalks, crosswalk and corners. This alternative would divert approximately 33 percent of the project-generated pedestrians parking in the Fifth and Mission Parking Garage from the street level. The projected diversions would reduce the pedestrian flow impacts on the southwest and northwest corners of the Fourth Street/Mission Street intersection, the southeast corner of the Fifth Street/Mission Street intersection, and on the west side of Fourth Street between Market and Mission Streets. This alternative would also help alleviate mid-block pedestrian crossing hazards on Mission Street west of Fourth Street.

Pacific Center
Alternative F: Pedestrian Bridge- Site Plan With Bridge

Figure 28



SOURCE: WHISLER-PATRI ARCHITECTS

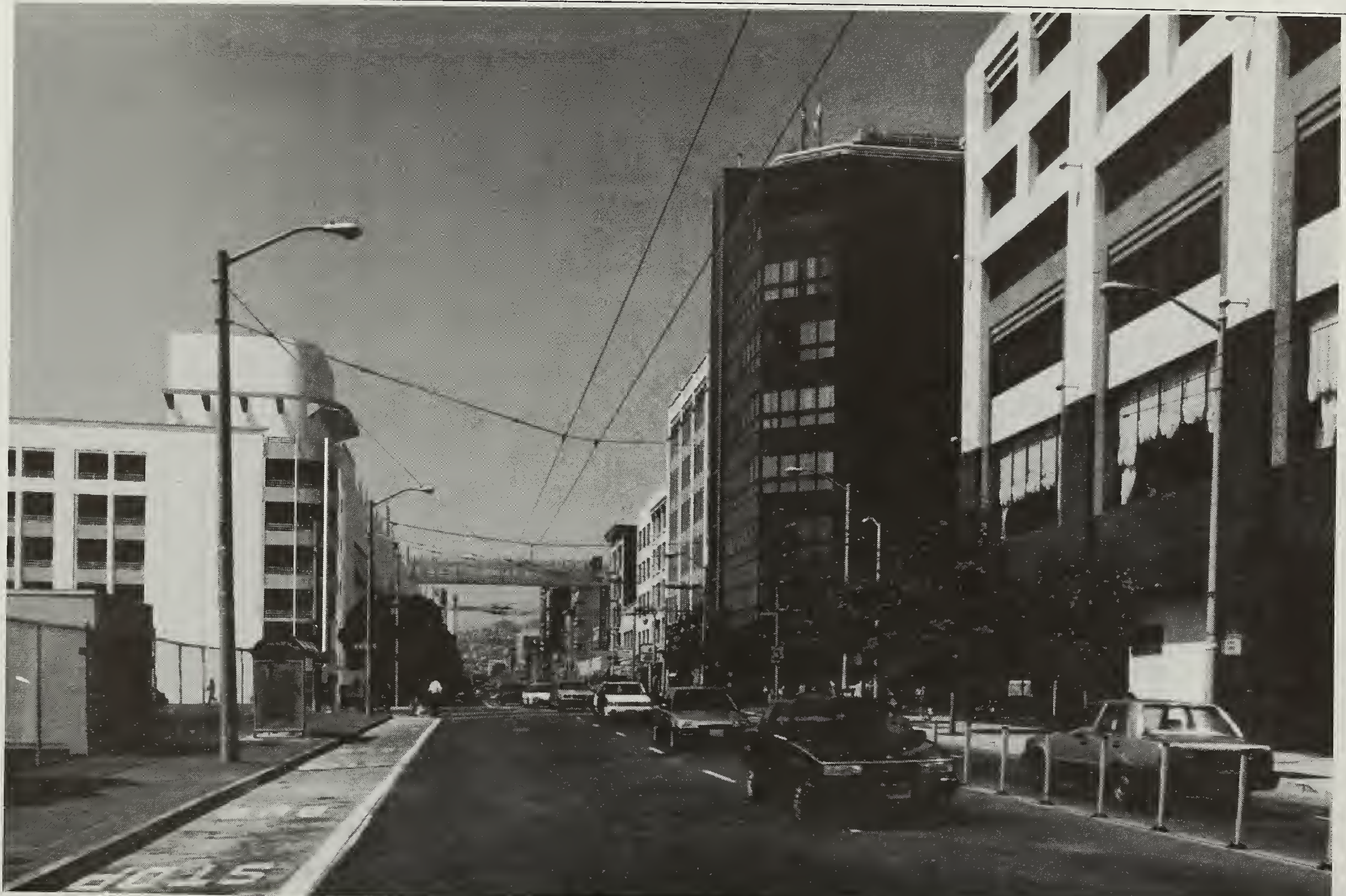
89311

NO SCALE

Pacific Center

Alternative F: Pedestrian Bridge - Photomontage Looking West Down Mission Street from Fifth Street

Figure 29



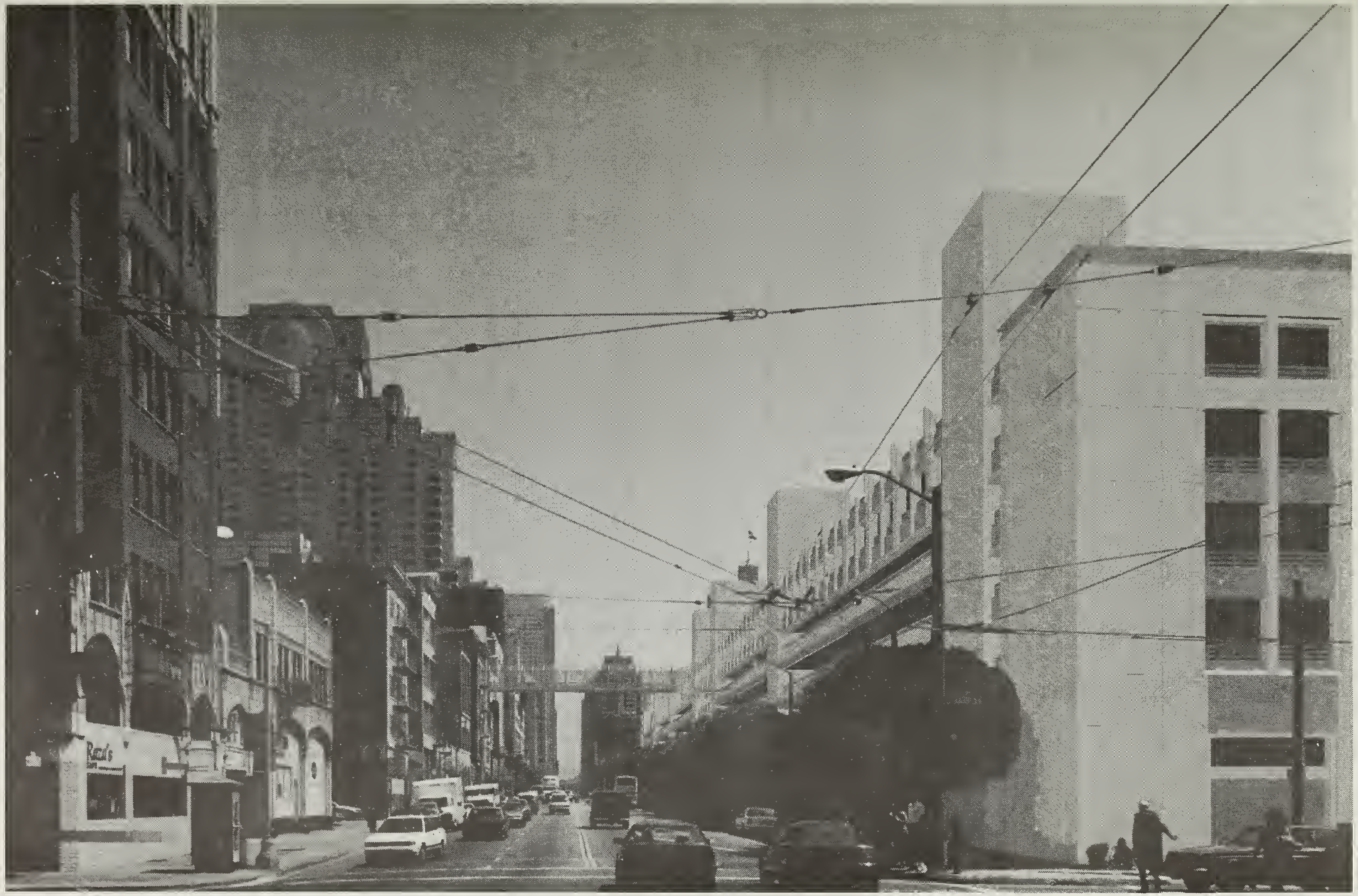
SOURCE: CADP

recycled paper

89311

Alternative F: Pedestrian Bridge - Photomontage Looking East Down Mission Street from Fifth Street

Figure 30



recycled paper

SOURCE: CADP

89311

This alternative would generate the same number of overall vehicle trips as the proposed project. There would be approximately 905 typical weekday P.M. peak hour (5:00-6:00 p.m.) trips, 1,790 typical weekend midday peak hour (12:00-1:00 p.m.) trips, 1,230 holiday (Thanksgiving to Christmas) weekday P.M. peak hour trips, and 2,885 holiday weekend midday peak hour trips. Consequently, traffic and air quality effects on local intersections under this alternative would be similar to the proposed project.

The pedestrian bridge would cross Jessie Street and Mission Street, resulting in some blocked views from the east and west looking down these streets. This effect would be greatest along Mission Street, which extends in a straight line for approximately two miles before it turns south into the Mission District. The terminus of the current view looking west on Mission Street is of Twin Peaks; the terminus of the current view looking east on Mission Street is of the San Francisco Bay, and portions of Treasure Island. The pedestrian bridge would partially obstruct these views from mid- and long-ranges vantages. From near-range vantages the pedestrian bridge would be clearly visible, blocking some views up and down Mission Street. This visual effect of the pedestrian bridge would be less pronounced on Jessie Street, due to the short length (one block) of the street at this location, and the two Emporium Store bridges which currently cross that street.

Several objectives and polices of the San Francisco *Master Plan* relate to this alternative. Objective 22 of the *Downtown Plan*, an area plan of the *Master Plan*, calls for "improve[ment of] the Downtown pedestrian circulation system, especially within the core, to provide for efficient, comfortable, and safe movement." Policy 3 of Objective 22 states: "Ensure convenient and safe pedestrian crossings." To promote this objective and policy, Map 7 of the *Downtown Plan*, Proposed Pedestrian Network: Downtown District, identifies a mid-block alignment from the Fifth and Mission Garage to Jessie Street (similar to that proposed under this alternative) as an Exclusive Pedestrian Walkway.

The *Urban Design Element* of the San Francisco *Master Plan* also contains objectives and policies related to this alternative. Objective 2, Policy 9, calls for "review of proposals for the giving up of street areas in terms of all the public values that streets afford." Moreover, this policy provides criteria against which a proposed street vacation, sale of air rights, etc., shall be reviewed. Among the various criteria, this policy recommends no release of a street if such release would cause "obstruction or diminishing of a significant view, or elimination of a viewpoint" (p. I.5.26, criterion 4).

The pedestrian bridge would shade portions of Mission and Jessie Street (and their adjacent sidewalks) throughout the year. These shadows would be greatest in the afternoons during the winter months, when the sun is at its lowest point. The *City Planning Code* (Section 146(a)) includes sun access criteria to allow direct sunlight to reach sidewalk areas of designated streets during critical hours of the day. The pedestrian bridge would not affect any sidewalks identified in Section 146(a). The pedestrian bridge would also not add shadow to any Proposition K parks protected by Section 295 of the *Code*.

STATUS OF THIS ALTERNATIVE

The project sponsor has indicated that this alternative is still under consideration.

G. ALTERNATIVE G: NO ON-SITE PATRON/EMPLOYEE PARKING

DESCRIPTION

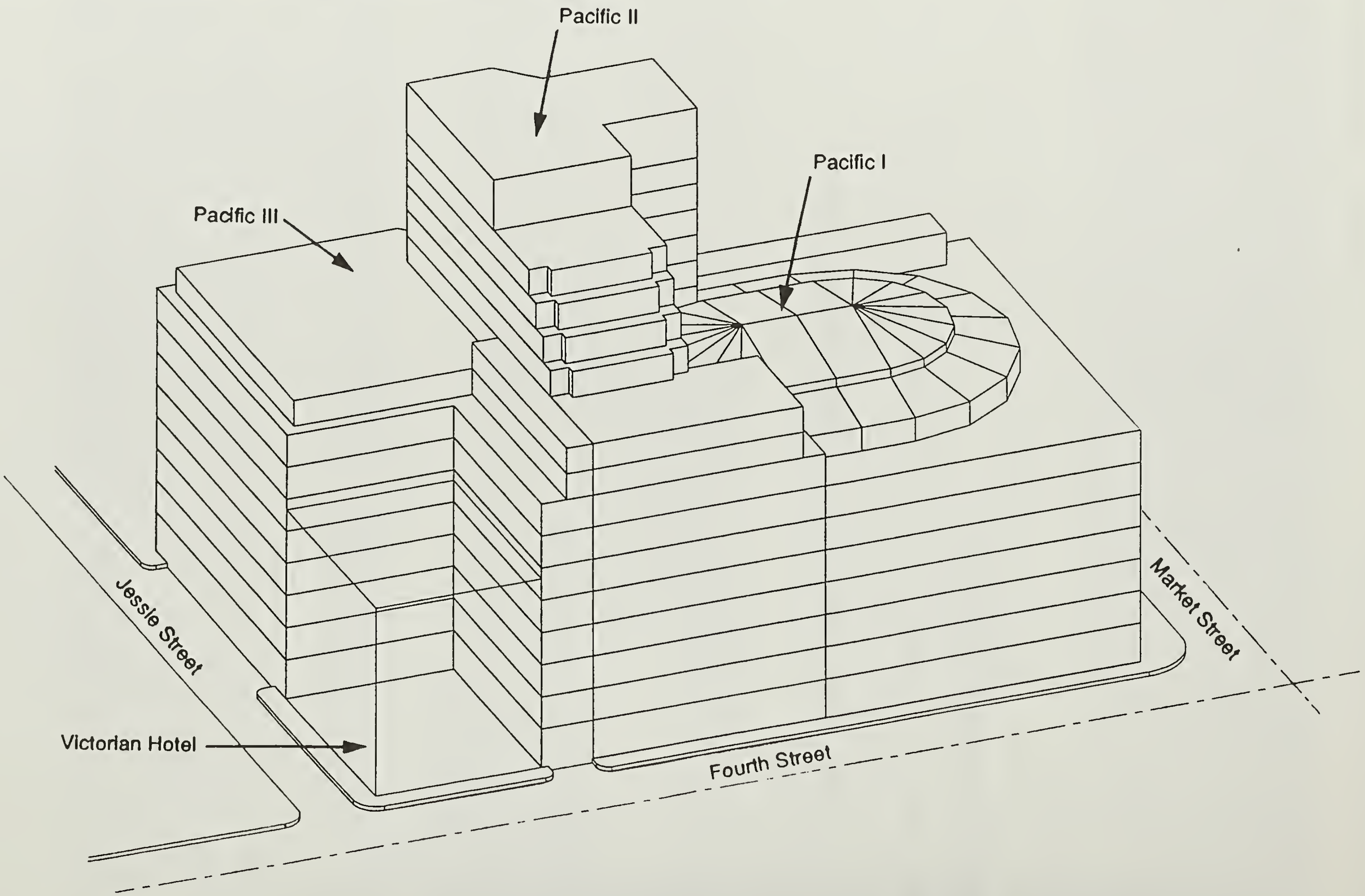
As part of the proposed project, on-site accessory parking for 130 vehicles would be provided on two basement levels; this parking would serve project patrons and employees in tandem-valet operation. Under Alternative G, this vehicle parking would not be provided. This alternative would include ten truck loading docks and 20 van loading space, the same as the proposed project. Access to the truck and van loading spaces would be the same as the proposed project, but the configuration of the van loading spaces would be modified; all van loading spaces would be on the second basement level under Alternative G, compared to the proposed project which would have 10 van spaces on each of the two basement levels.

In place of the accessory parking provided under the proposed project, this alternative would include additional retail space in the existing basement levels. To meet FAR requirements, there would be less office space than under the proposed project, one less floor level in the Pacific III building, and 3-5 movie theaters located on the uppermost level of Pacific III (see Figure 31, page 164). This alternative would contain the following uses: approximately 482,500 sq. ft. of retail space (5,500 sq. ft. more than the project); 82,000 sq. ft. of office space (26,000 less than the project); 19,000 sq. ft. of open space (the same as the project); 21,300 sq. ft. of movie theater space (21,300 sq. ft. more than the project); and 74,200 sq. ft. of mechanical/maintenance/loading space compared to about

Pacific Center

Alternative G: No On-Site Patron/Employee Parking

Figure 31



SOURCE: WHISLER-PATRI ARCHITECTS.

89311

98,000 sq. ft. of mechanical/maintenance/parking/loading space under the proposed project. Alternative G would consequently contain about 679,000 gross square feet of space, compared to 702,000 sq. ft. for the proposed project, a difference of 23,000 sq. ft.

As with the proposed project, the Pacific Building facades would undergo seismic reinforcement and architectural restoration. The Pacific Building interior and the 22 Fourth Street building interior would be demolished, replaced with an integrated floor plate design.

IMPACTS

The building envelope of this alternative would be the same as with the proposed project, with one exception: the Pacific III portion of the project would be nine stories in height, one story shorter than under the proposed project. Therefore, the following effects (described in Chapter IV. Environmental Impacts, pages 69 to 134) would be the same or slightly less than the proposed project: visibility of this alternative in near-, mid- and long-range views; wind speeds on sidewalks adjacent to the site; additional shadows on streets and sidewalks; and the relationship of the alternative to the existing urban context. Architectural restoration and seismic reinforcement of the Pacific Building facades would be the same as under the proposed project. Construction noise and construction air quality impacts for this alternative would be the same as with the proposed project, and the construction duration would be about the same.

The overall FAR of this alternative would be 9:1 (the same as the project), which would be achieved by the use of approximately 80,000 sq. ft. of transferable development rights (TDR), obtained from as-yet unidentified lots in the C-3 district.

This alternative would generate a slightly greater number of overall vehicle trips than the proposed project, despite the reduction in gross square footage; this would result from the increase in retail space and the inclusion of theater space. There would be approximately 990 typical weekday P.M. peak hour (5:00-6:00 p.m.) trips (about 85 more than the project), 1,810 typical weekend midday peak hour (12:00-1:00 p.m.) trips (20 more than the project), 1,310 holiday (Thanksgiving to Christmas) weekday P.M. peak hour trips (80 more than the project), and 2,900 holiday weekend midday peak hour trips (15 more than the project). Consequently, traffic and air quality effects on local intersections and anticipated parking demand would be correspondingly greater under this alternative than the proposed project.

This alternative, by not including on-site parking and by increasing overall vehicle trips, would also have greater effects on on-street and off-street parking facilities in the project area. This alternative would increase the off-site parking demand and parking shortfall by at least 130 over that for the proposed project (see Table 6, Project Area Parking Utilization Summary, page 111).

This alternative would accommodate about 1,745-1,765 workers on the site (up to 55 less than the project), consisting of about 1,380 retail workers (30 more than the project), 300 office workers (100 less than the project), about 30 security and maintenance workers (20 less than the project) and about 35-55 theater workers.

STATUS OF THIS ALTERNATIVE

The project sponsor has indicated that this alternative is still under consideration.

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1. LOS D (Volume to Capacity (V/C) ratio 0.81–0.90) represents traffic operations at signalized intersections within the acceptable LOS range. LOS E (V/C ratio 0.91–1.00) represents intersection capacity and is not within the acceptable LOS range. A proposed project would have a significant impact on a signalized intersection if it resulted in a deterioration in LOS from LOS D or better to LOS E or worse, or caused an LOS E or LOS F condition to deteriorate substantially.

2. As discussed in EIR Chapter IV.D, Transportation, pages 94-95, pedestrian intercept surveys were conducted during holiday and non-holiday periods at the Neiman Marcus Store (southeast corner of the Geary/Stockton intersection) and at the San Francisco Shopping Centre (southeast corner of the Market/Fifth intersection). The results of these surveys provided the basis for developing base data on retail patron trip generation rates, mode split characteristics and trip distribution characteristics. The Neiman Marcus Store and the San Francisco Shopping Centre have similar trip generation and trip distribution characteristics, but dissimilar mode split characteristics; San Francisco Shopping Centre has a higher transit use and a lower auto use, as percentages of all travel modes, compared to the Neiman Marcus Store. This variation in travel mode split is attributable, at least in part, to the direct underground connection to the Powell Street BART/MUNI transit station present at the San Francisco Shopping Centre.

3. The employment density factor for movie theaters is approximately 11.25 employees per screen (Vicky Ek, United Artists District Office, telephone conversation, April 15, 1992. This employment density factor is also used in the analysis of Alternative G; Alternative G would include 3-5 movie theaters.

4. On May 2, 1990, the City Planning Department adopted and issued a Negative Declaration on a plan to increase the size of the Fifth and Mission Garage (Case No. 88.408E). The project would add two additional floors of parking and convert approximately 35,000 sq. ft. of the ground-floor to retail space. There would be a net increase of 841 parking spaces on-site (from 1,774 to 2,615), the

garage would be increased from five to seven stories in height (approximately 38 ft.), and entrances, exits and internal circulation would be reconfigured. The project description calls for designing the structure to accommodate the potential construction of up to two overhead pedestrian bridges; one to be located mid-block over Mission Street and the other to be located at the east side of the building over Fourth Street near the corner of Mission Street. The proposed expansion plan was approved by the Redevelopment Agency Commission on May 20, 1992.

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Attn: Tony Blaczek, Doug Longyear

Coldwell Banker
One Embarcadero Center, 23rd Floor
San Francisco, CA 94111
Attn: Mark P. Gasreiter,
Richard J. Lieten

Cushman & Wakefield of California, Inc.
Bank of America Center
555 California Street, Suite 2700
San Francisco, CA 94104
Attn: Wayne Stiefvater
Lawrence Farrell

Damner Pike & Co.
100 Pine Street, Suite 2100
San Francisco, CA 94111
Attn: Charles McCabe

Damner Pike & Co.
345 California Street, Suite 1800
San Francisco, CA 94104
Attn: Frank Fudem

DKS Associates
1956 Webster Street, Suite 300
Oakland, CA 94612

NOTICE OF AVAILABILITY RECIPIENTS (Cont.)

EIP Associates
601 Montgomery Street, Suite 500
San Francisco, CA 94111
Attn: Steven Appleton

Environmental Simulation Lab.
119 Wurster Hall
UC Berkeley
Berkeley, CA 94720
Attn: Peter Bosselman

Environmental Science Associates, Inc.
301 Brannan Street, Suite 200
San Francisco, CA 94107

Fan & Associates
Architecture & Planning, Inc.
580 Market Street, Suite 300
San Francisco, CA 94104
Attn: Robert Fan

Farella, Braun & Martel
235 Montgomery Street
San Francisco, CA 94104
Attn: Sandra Lambert

Food & Fuel Retailers for
Economic Equality
770 L Street, Suite 960
Sacramento, CA 95814
Attn: Doug Stevens, State Coordinator

Gensler and Associates
550 Kearny Street
San Francisco, CA 94111
Attn: Peter Gordon

Goldfarb & Lipman
One Montgomery Street
West Tower, 23rd Floor
San Francisco, CA 94104
Attn: Paula Crow

Gruen, Gruen & Associates
564 Howard Street
San Francisco, CA 94105

David Heindel, Real Estate Specialist
Mayor Office of Business
100 Larkin Street
San Francisco, CA 94102

Valerie Hersey
Munsell-Brown
950 Battery
San Francisco, CA 94111

The Jefferson Company
1700 California, Suite 470
San Francisco, CA 94107

Jones Lang Wootton
One Embarcadero Center, Suite 710
San Francisco, CA 94111
Attn: Sheryl Bratton

Kaplan/McLaughlin/Diaz
222 Vallejo Street
San Francisco, CA 94111
Attn: Jan Vargo

Larry Mansbach
595 Market Street, Suite 2500
San Francisco, CA 94105

Cliff Miller
970 Chestnut Street, #3
San Francisco, CA 94109

Milton Meyer & Co.
One California Street
San Francisco, CA 94111
Attn: James C. Devoy

Robert Meyers Associates
582 Market Street, Suite 1208
San Francisco, CA 94104

George Miers & Associates
369 15th St.
Oakland, CA 94612
Attn: Marty Zwick

Morrison & Foerster
345 California Street
San Francisco, CA 94104
Attn: Jacob Herber

NOTICE OF AVAILABILITY RECIPIENTS (Cont.)

National Lawyers Guild
558 Capp Street
San Francisco, CA 94110
Attn: Regina Sneed

Nichols-Berman
142 Minna Street
San Francisco, CA 94105
Attn: Louise Nichols

Norris, Beggs & Simpson
601 California Street, Suite 1400
San Francisco, CA 94108
Attn: Karen Weber

Page & Turnbull
364 Bush Street
San Francisco, CA 94104

Perini Corp.
75 Broadway
San Francisco, CA 94111
Attn: Christophen Scales

Pettit & Martin
101 California, 35th Floor
San Francisco, CA 94111
Attn: John M. Sanger

Pillsbury, Madison & Sutro
P.O. Box 7880
San Francisco, CA 94120
Attn: Marilyn L. Siems

Pillsbury, Madison & Sutro
235 Montgomery Street, Suite 1433
San Francisco, CA 94104
Attn: Gary Sutton/Suheil Totah

Planning Analysis & Development
50 Francisco Street
San Francisco, CA 94133
Attn: Gloria Root

Mrs. G. Bland Platt
362 Ewing Terrace
San Francisco, CA 94118

RB International Services
9 Boston Ship Plaza
San Francisco, CA 94111
Attn: Rita Dorst

Ramsay/Bass Interest
3756 Grant Avenue, #301
Oakland, CA 94610
Attn: Peter Bass

Capital Planning Dept.
UCSF
145 Irving Street
San Francisco, CA 94122
Attn: Bob Rhine

David Rhoades & Associates
400 Montgomery Street, Suite 604
San Francisco, CA 94104

Rockefeller & Associates
Realty L.P.
Four Embarcadero, Suite 2600
San Francisco, CA 94111
Attn: Herb Lembke, FAIA

Rothschild & Associates
244 California Street, Suite 500
San Francisco, CA 94111
Attn: Thomas N. Foster

Royal Lepage Commercial Real Estate Services
353 Sacramento Street, Suite 500
San Francisco, CA 94111
Attn: Richard Livermore

Royal Title
One California Street, Suite 2200
San Francisco, CA 94111
Attn: Jim Galvin

The Rubicon Group
351 California Street, Suite 500
San Francisco, CA 94104
Attn: Kenneth Sproul

NOTICE OF AVAILABILITY RECIPIENTS

Rubloff Development Group
One Maritime Plaza, Suite 1025
San Francisco, CA 94111
Attn: Charmaine Clay

Sedway Cooke Associates
300 Montgomery Street, Suite 200
San Francisco, CA 94104

Shartsis Freise & Ginsburg
One Maritime Plaza, 18th Floor
San Francisco, CA 94111
Attn: Dave Kremer

Skidmore, Owings & Merrill
333 Bush Street
San Francisco, CA 94104
Attn: Jerry Goldberg

Solem & Associates
545 Mission Street
San Francisco, CA 94105
Attn: Olive Lewis

Kent Soule
1180 Filbert Street, #204
San Francisco, CA 94109

Square One Film & Video
725 Filbert Street
San Francisco, CA 94133

Steefel, Levitt & Weiss
One Embarcadero Center, 29th Floor
San Francisco, CA 94111
Attn: Robert S. Tandler

TRI
100 Pine Street, Suite 2300
San Francisco, CA 9411
Attn: Mathewe Cappiello

Jerry Tone
Montgomery Capital Corp.
244 California Street
San Francisco, CA 94111

Jon Twitchell Associates
143 Connecticut Street
San Francisco, CA 94107

Stephen Weicker
899 Pine Street, #1610
San Francisco, CA 94108

Howard Wexler
235 Montgomery, 27th Floor
San Francisco, CA 94104

Whisler-Patri
P.O. Box 7054
San Francisco, CA 94120-7054
Attn: Marie Zeller

Eunice Willette
1323 Gilman Ave.
San Francisco, CA 94124

Bethea Wilson & Associates
Art in Architecture
2028 Scott Street, Suite 204
San Francisco, CA 94115

PROJECT SPONSOR

Ahmanson Commercial Development Co.
155 Grand Avenue, Suite #777
Oakland, CA 94612
Attn: Monroe Townsend

PROJECT ARCHITECT

Whisler-Patri
2 Bryant Street
San Francisco, CA 94105
Attn: Marie Zeller

IX. APPENDICES

APPENDIX A: Initial Study

APPENDIX B: Architectural Resources

APPENDIX C: Transportation

APPENDIX D: Air Quality

APPENDIX E: Typical Noise Levels

APPENDIX F: Wind Study

APPENDIX A: INITIAL STUDY

NOTICE THAT AN ENVIRONMENTAL IMPACT REPORT IS DETERMINED TO BE REQUIRED

Date of this Notice: February 27, 1992

Lead Agency: City and County of San Francisco, Department of City Planning, 450 McAllister Street, 5th floor, San Francisco, CA 94102

Agency Contact Person: Paul Maltzer **Telephone:** (415) 558-6391

Project Title: 91.159E: Pacific Center

Project Sponsor: Ahmanson Commercial Development Co.
Project Contact Person: Monroe Townsend
Telephone: (510) 839-0977

Project Address: 801 Market Street, southwest corner of Fourth and Market Streets
Assessor's Block(s) and Lot(s): 3705/1, 46, 47
City and County: San Francisco

Project Description: The project would consist of adaptive reuse of the historic Pacific Building (Pacific I), the renovation of an adjacent 16-story office building (Pacific II), and the construction of a ten-story building on the Pacific III site. The project would integrate these three buildings into a single structure, that would be a vertical retail and office complex organized around a seven-story courtyard. All office space in existing structures would be converted to retail use with the exception of the top six stories of Pacific II. The proposed project would contain a total of about 486,000 sq. ft. of retail space (including department stores, small retail stores and restaurants); a reduction of existing office space to about 123,000 sq. ft.; parking, loading and mechanical space of about 74,420 sq. ft.; and about 26,580 sq. ft. of public open space, for a total development of about 710,000 gross sq. ft. Off-street parking and loading would provide 20 delivery van spaces, ten truck loading spaces, and tandem-valet operation for 130 cars on two basement levels and at grade. Basement parking and van loading dock entry and egress would be from Fourth Street (just north of the Victorian Hotel); access to truck loading docks would be from Jessie Street.

THIS PROJECT MAY HAVE A SIGNIFICANT EFFECT ON THE ENVIRONMENT AND AN ENVIRONMENTAL IMPACT REPORT IS REQUIRED. This determination is based upon the criteria of the Guidelines of the Secretary of the State for Resources, Section 15063 (Initial Study), 15064 (Determining Significant Effects), and 15065 (Mandatory Findings of Significance), and the following reasons, as documented in the Environmental Evaluation (Initial Study) for the project, which is attached.

Please see attached Initial Study

Deadline for Filing of an Appeal of this Determination to the City Planning Commission: March 19, 1992.

An appeal requires:
1) a letter specifying the grounds for an appeal; and
2) a $75. filing fee.

Barbara W. Sahm

Barbara W. Sahm
Environmental Review Officer

PACIFIC CENTER
INITIAL STUDY
91.159E

I. PROJECT DESCRIPTION

Ahmanson Commercial Development Company proposes to develop an approximately 710,000 sq. ft. vertical retail and office complex through new construction and rehabilitation of existing buildings. The project sponsor's objectives are to develop a retail project containing retail and office uses, and to rehabilitate and restore an historically significant building for contemporary use.

The proposed project would be located at 801 Market Street, at the southwest corner of the intersection of Fourth and Market Streets. The 67,763-square-foot (sq. ft.) project site is located on Lots 1, 46 and 47 of Assessor's Block 3705. The project site is bounded by Market Street, Fourth Street, the Victorian Hotel at the southwest corner of Jessie and Fourth Streets, Jessie Street, and the 308 Jessie Street and 833 Market Street buildings (see Figure 1, page 3). The project site contains the nine-story, 254,453-sq.-ft. Pacific Building at the corner of Fourth and Market Streets (known as Pacific I); the 16-story, 275,465-sq.-ft. 22 Fourth Street building on Fourth Street between Market and Jessie Streets (known as Pacific II); and a loading dock and service area on Jessie Street (known as Pacific III). The site is in the C-3-R (Downtown Retail) use district and in two height and bulk districts: 120-X and 160-S.

The project would consist of adaptive reuse of the nine-story historic Pacific Building (Pacific I), the renovation of an adjacent 16-story office building (Pacific II), and the construction of a ten-story building on the Pacific III site. The project would integrate these three buildings into a single structure that would be a vertical retail and office complex organized around a seven-story courtyard (see Figure 2, page 4). With the exception of the top six stories of Pacific II, all office space in existing structures would be converted to retail use. The proposed project would contain a total of about 486,000 gross sq. ft. of retail space (including department stores, small retail stores and restaurants), a reduction in the existing office space from about 416,725 sq. ft. to about 123,000 sq. ft., parking, loading and mechanical space of about 74,420 sq. ft., and about 26,580 sq. ft. of public open space, for a total development of about 710,000 gross sq. ft. Off-street parking and loading would provide 20 delivery van spaces, ten truck loading spaces and tandem-valet operation

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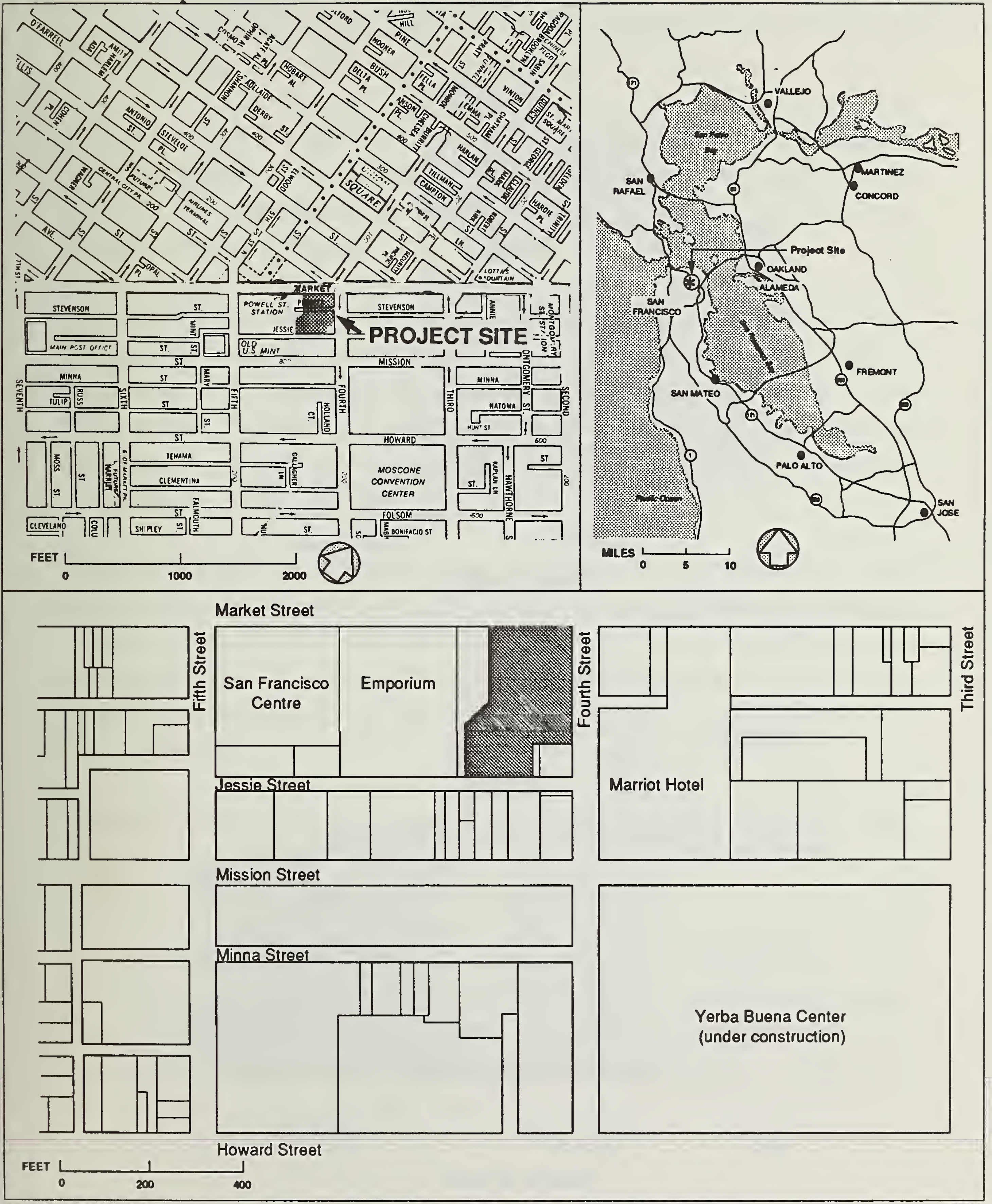
* Derived from State EIR Guidelines, Appendix G, normally significant effect.

Pacific Center
Site Location Map

Figure 1

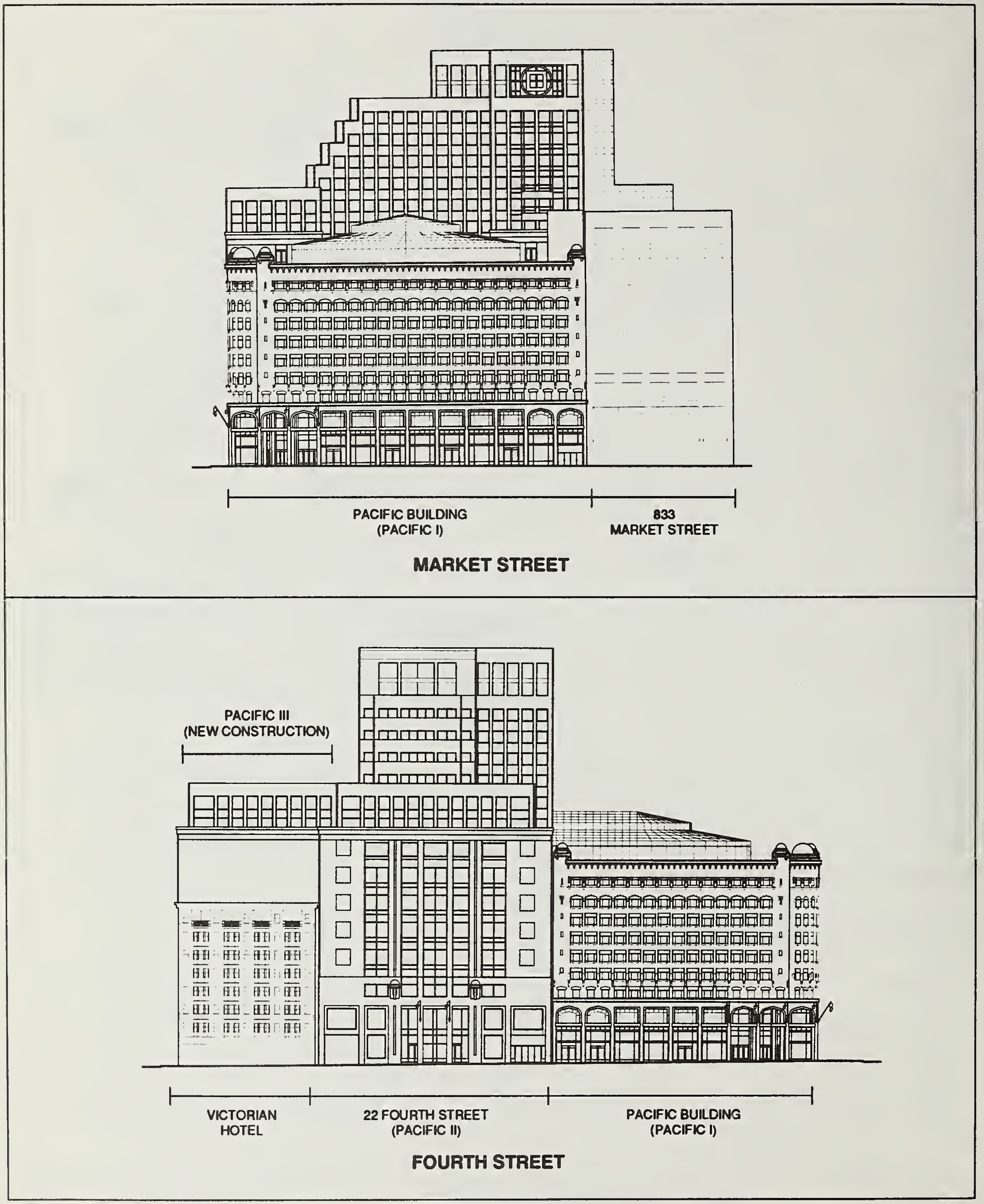


SOURCE: EIP ASSOCIATES

▨ Project Site
Assessor's Block 3705
Lots 1, 46 and 47

PACIFIC CENTRE
MARKET STREET AND FOURTH STREET ELEVATIONS

FIGURE 2


PACIFIC BUILDING (PACIFIC I)
833 MARKET STREET
MARKET STREET
PACIFIC III (NEW CONSTRUCTION)
VICTORIAN HOTEL
22 FOURTH STREET (PACIFIC II)
PACIFIC BUILDING (PACIFIC I)
FOURTH STREET

SOURCE: WHISLER - PATRI

89311

parking and van loading dock entry and egress would be from Fourth Street (just north of the Victorian Hotel); access to truck loading docks would be from Jessie Street.

The basic permitted floor area ratio (FAR) is 6:1; the maximum allowable FAR, including transferable development rights (TDR) is 9:1. The overall FAR of the project would be about 9:1, which would be achieved by the use of approximately 79,950 sq. ft. of TDR from as yet unidentified lots in the C-3 District.

The Pacific Building is designated as a Category I (Significant) Building in Appendix A to Article 11 of the San Francisco *City Planning Code*, referenced in the Downtown Plan, and is within the Kearny-Market-Mason-Sutter Conservation District identified in Article 11, Appendix E. This reinforced concrete building currently contains 27,264 sq. ft. of ground floor retail space and about 227,189 sq. ft. of upper floor office and/or apparel mart space. This building would be rehabilitated and restored, and would contain a central seven-story courtyard.

The amount of gross floor area in Pacific I would be reduced from about 254,453 sq. ft. to 187,900 sq. ft., a decrease of about 66,553 sq. ft. The Pacific I and Pacific II buildings would both be reconfigured internally to correct the existing offset levels. Pacific II would contain office and retail space; the total amount of usable space in Pacific II would be reduced from about 275,465 sq. ft. to 263,500 sq. ft., a decrease of 11,965 sq. ft. Construction of Pacific III would add about 157,500 gross sq. ft. of space to the site.

The estimated construction cost of the project would be about $60 million (1991 dollars), including excavation and building shell.

II. INTRODUCTION

The Pacific Center EIR will incorporate information, as appropriate, from previously published Program EIRs. Most of that information is related to cumulative impacts of downtown growth contained in the *Mission Bay EIR* (Case No. 86.505E), *South of Market Plan EIR* (Case No.

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* Derived from State EIR Guidelines, Appendix G, normally significant effect.

85.463E, Final EIR certified December 7, 1989), and the *Downtown Plan EIR* (Final EIR certified October 18, 1984, Case No. EE81.3). The *Mission Bay EIR* covers the impacts of potential development in a 300-acre area just south of the greater downtown, from Townsend Street to 16th Street, east of the I-280 freeway. The *South of Market Plan EIR* analyzes impacts of development under the *South of Market Plan* development controls and alternatives in the area generally south of Mission Street to the Mission Bay planning area and east of U.S. 101 to the Rincon Hill area east of Second Street. The *Downtown Plan EIR* analyzes the impacts of various development policy alternatives in the C-3 (Downtown) zoning districts in San Francisco.

The *Mission Bay* and *South of Market EIRs* include the most current estimates of employment growth for the Downtown & Vicinity, including Mission Bay, and for the rest of the City; revised analysis and conclusions regarding overall cumulative transportation impacts in the future; and new cumulative air quality information. (The term "Downtown & Vicinity" means the C-3 District and the areas around it: South of Market, Mission Bay, South Van Ness, Civic Center, and the Northeastern Waterfront. See *Mission Bay EIR*, Vol. II, pp. IV.4-5.) The *Downtown Plan EIR* contains other cumulative impact information on such topics as energy consumption, community services and seismic effects that are also applicable to the Pacific Center project.

Where information from those areawide EIRs is presented in the Pacific Center EIR, it will be incorporated by reference with a summary, pursuant to CEQA Sections 21061 and 21003 (see also State CEQA Guidelines Section 15150). Those reference documents are available for public review at the Department of City Planning, Office of Environmental Review, 450 McAllister Street, San Francisco, the San Francisco Main Library and various branch libraries.

III. SUMMARY OF POTENTIAL EFFECTS

A. EFFECTS FOUND TO BE POTENTIALLY SIGNIFICANT

Construction and operation of the Pacific Center project are examined in this Initial Study to identify the project's potential effects on the environment. The proposed project itself, or cumulatively with other similar projects in the vicinity, might generate environmental impacts that could be considered significant; such impacts will be analyzed in the Environmental Impact Report (EIR) for the project. These potential environmental impacts could occur in the areas of transportation, construction-related noise impacts, traffic-generated and cumulative air quality, visual quality and architectural resources. For informational purposes, the EIR will also discuss land use, relationship of the proposed project to the *Master Plan* and the *Planning Code*, urban design, employment and seismicity.

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* Derived from State EIR Guidelines, Appendix G, normally significant effect.

B. EFFECTS FOUND NOT TO BE SIGNIFICANT

The following potential impacts were determined either to be insignificant or to be mitigated through measures included in the project. These items are discussed in Section IV below and require no further analysis in the EIR.

Glare. The proposed project would not generate any light or glare impacts on other properties. Mirrored glass would not be used.

Operational Noise. The project would not be affected by ambient noise levels due to the inclusion of noise insulation features in the project design. Project operation, including traffic generated by the project, would not significantly increase the ambient noise levels in the project vicinity. Operational noise would be regulated by the San Francisco Noise Ordinance, and the project would conform to the Noise Guidelines of the Environmental Protection Element of the Master Plan. Construction noise is a potentially significant effect that will be discussed in the EIR.

Construction Air Quality. Construction activities could cause a temporary violation of ambient air quality standards in the site vicinity; a measure to reduce emissions generated during construction activities to an insignificant level is included in the project (see page 34).

Biology. The proposed project site is completely developed; therefore, the project would not affect any rare or endangered species or habitats and would not interfere with any resident or migratory species.

Geology/Topography. A geotechnical report would be prepared by a California-licensed soils engineer. Building excavation and construction would conform to the recommendations of that report. Measures to mitigate potential impacts associated with excavation are included in the project (see page 34). Seismic issues will be discussed in the EIR.

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* Derived from State EIR Guidelines, Appendix G, normally significant effect.

Water. The project site is completely covered by impervious surfaces; therefore, the proposed project would not affect water quality or other water resources.

Utilities/Public Services. The proposed project would increase the demand for utilities and public services but would not require additional personnel or equipment. The project would contribute to the cumulative demand for public utilities and services in the Downtown area. Such impacts anticipated from cumulative Downtown development were analyzed in the *Downtown Plan EIR* (EE81.3, Final EIR certified October 18, 1984), and no significant impacts were identified. This information remains current and valid, and this topic will not be discussed in the EIR. The *Downtown Plan EIR* may be examined at the Department of City Planning, 450 McAllister Street, the San Francisco Main Library, and various branch libraries.

Energy/Natural Resources. The project would be constructed to conform with the energy requirements of Title 24 of the *California Code of Regulations*. It would not encourage activities that would result in the wasteful use of energy or have a substantial effect on a natural resource. Cumulative and indirect effects, including those of the project, are addressed in the EIR prepared for the Downtown Plan. That information remains current and valid, and requires no further analysis; therefore, it will not be discussed in the EIR for the project.

Hazards. The buildings to be remodeled could contain asbestos-containing materials (ACMs). Mitigation measures to ensure project compliance with applicable regulations for asbestos abatement are included in the project (see page 34-35). In addition, the remodeled buildings would comply with current building codes, including those pertaining to seismic and fire safety. Possible soil contamination of the site will be discussed in the EIR. Once constructed, the project would not create a health hazard or be affected by hazardous uses. Mitigation measures to ensure project compliance with the City's *Emergency Response Plan* are included in the project (see pages 34 and 35).

Housing. The proposed project would not include the construction of any residential units, nor would it result in the demolition of any residential units.

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* Derived from State EIR Guidelines, Appendix G, normally significant effect.

Cultural. The project would include little or no excavation; therefore, potential impacts to underlying cultural resources are limited. Mitigation measures to protect such resources, should the project excavate below existing basement levels, are included in the project (see pages 35-36).

IV. ENVIRONMENTAL CHECKLIST AND DISCUSSIONS

A. COMPATIBILITY WITH EXISTING ZONING AND PLANS

		Not Applicable	Discussed
1.	Discuss any variances, special authorizations, changes proposed to the *City Planning Code* or Zoning Map, if applicable.	_	X
*2.	Discuss any conflicts with any other adopted environmental plans and goals of the City or Region, if applicable.	X	_

The project would comply with the *City Planning Code* requirements concerning height and use in the C-3-R (Downtown Retail) District and the 120-X and 160-S Height and Bulk Districts in which the proposed 9-16 story, approximately 710,000 gross sq. ft. retail project would be located. The Pacific I building is rated as a Category I significant building. As such, the proposed project would require review under Article 11 of the *Planning Code* as an alteration to a significant building (see further discussion below, at pp. 31-33). The relationship of the proposed project to the policies of the San Francisco Master Plan, including the Downtown Plan, and provisions of the *City Planning Code*, will be discussed in the EIR. The project would not conflict with other adopted plans or goals; however, issues related to the project's compatibility with zoning and plans will be discussed in the EIR.

The project would use about 80,000 sq. ft. of transferable development rights (TDR) from as yet unidentified lots in the C-3 District, as allowable under *City Planning Code* Section 128.

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* Derived from State EIR Guidelines, Appendix G, normally significant effect.

B. ENVIRONMENTAL EFFECTS	Yes	No	Discussed
1. Land Use. Could the project:			
*a. Disrupt or divide the physical arrangement of an established community?	_	X	X
b. Have any substantial impact upon the existing character of the vicinity?	_	X	X

The proposed project site is located in the C-3-R District (Downtown Retail) District and the 120-X and 160-S Height and Bulk Districts. This area is characterized by a mix of department and specialty stores, hotels, office and commercial buildings, above ground floor retail and restaurant uses. The south of Market Street area in which the project site is located has historically supported printing, wholesaling and light industrial uses. The proposed project would include the following actions: rehabilitation and renovation of the existing Pacific Building (Pacific I); renovation of the adjacent 10-16 story 22 Fourth Street office building (Pacific II); construction of a 10-story building on the Pacific II site; and integration of these elements into a single complex containing retail and office uses. The proposed project would increase the intensity of uses on site, and add retail and restaurant as new uses on the site. The project would contain about 74,420 sq. ft. of parking, loading and mechanical space, which could accommodate approximately 130 vehicles under tandem-valet operation, 20 delivery van spaces and 10 truck loading spaces.

Section 210.3 of the *City Planning Code* states that the C-3-R (Downtown Retail) District "is a regional center for comparison shopper retailing and direct consumer services. It covers a compact area with a distinctive urban character, consists of uses with cumulative customer attraction and compatibility, and is easily traversed by foot." The project would be compatible with the C-3-R land use designation.

While no significant change in land use would result from the project, land use and zoning issues will be discussed in the EIR.

The scale of the project in relation to surrounding development will be discussed in the Urban Design section of the EIR.

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* Derived from State EIR Guidelines, Appendix G, normally significant effect.

2. Visual Quality. Could the project:	Yes	No	Discussed
*a. Have a substantial, demonstrable negative aesthetic effect?	X	_	X
b. Substantially degrade or obstruct any scenic view or vista now observed from public areas?	_	X	X
c. Generate obtrusive light or glare substantially impacting other properties?	_	X	X

The EIR will discuss the potential aesthetic effects of the proposed project, as they relate to Article 11 of the *City Planning Code* and alterations to significant buildings (see pages 31-33 below). The EIR will discuss the proposed project's design, appearance and scale in relation to surrounding development. The EIR will provide photomontages that illustrate the way the proposed project would appear once constructed. The proposed project would not include any reflective glass and would not cause any glare impacts on nearby pedestrians or autos. The proposed project would comply with *City Planning Code* Resolution 9212, which prohibits the use of mirrored or reflective glass. The EIR, therefore, will not discuss glare impacts of the proposed project.

The EIR will discuss the proposed project's relationship to the urban design policies of the *Downtown Plan* and the objectives and policies of the Urban Design Element of the Master Plan.

3. Population. Could the Project:	Yes	No	Discussed
*a. Induce substantial growth or concentration of population?	_	X	X
*b. Displace a large number of people (involving either housing or employment)?	_	X	X
c. Create a substantial demand for additional housing in San Francisco, or substantially reduce the housing supply?	_	X	X

The proposed project would not include the construction of any residential units, nor would it result in the demolition of any residential units. This issue will not be discussed further in the EIR. The proposed project would develop less than 25,000 sq. ft. of new office space, and is therefore exempt from *City Planning Code* Section 313, Housing Requirements for Office Development Projects. This issue will not be discussed further in the EIR.

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* Derived from State EIR Guidelines, Appendix G, normally significant effect.

There are currently about 113 persons employed on the project site. Thirty-seven retail employees work on the ground floor of Pacific I. In Pacific II, there are 64 office workers, two retail employees, and 10 contract laborers (six security, two janitorial and two building engineering).[1] Project-specific employment information regarding number and type of employees on site with the proposed project, including business displacement, will be included in the EIR.

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[1] Mary Olsen, Vice President and General Manager, 821 Market Street Association, telephone conversation, October 7, 1991.

4. Transportation/Circulation. Could the project:	Yes	No	Discussed
*a. Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system?	X		X
b. Interfere with existing transportation systems, causing substantial alterations to circulation patterns or major traffic hazards?	X		X
c. Cause a substantial increase in transit demand which cannot be accommodated by existing or proposed transit capacity?	X		X
d. Cause a substantial increase in parking demand which cannot be accommodated by existing parking facilities?	X		X

Additional employment at the site would result in increased demand on existing transportation systems. The proposed project would cause traffic circulation problems and increases in traffic, transit and parking demand. The number of pedestrians in the area would also increase. The traffic entering and exiting the proposed project's parking garage on Fourth Street would affect the traffic on Market, Fourth and Mission Streets, all Transit Preferential Streets. The EIR will discuss traffic increases and circulation impacts as they relate to the operation of the street and freeway network in the project vicinity. Impacts on transit operations on Market, Mission, and Fourth Streets will be discussed.

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* Derived from State EIR Guidelines, Appendix G, normally significant effect.

The proposed project would provide a total of 20 delivery van spaces, 10 truck loading spaces, and tandem-valet operation for 130 cars. There are currently two basement levels containing 161 regular parking spaces and four handicapped parking spaces on the site. Trip generation and parking demand will be discussed in the EIR.

The cumulative transportation effects of development in the C-3 Districts (including the project) have been analyzed in the *Downtown Plan EIR*, and updated in the *Mission Bay EIR* and *South of Market EIR*. In certifying the *Downtown Plan EIR*, the City Planning Commission determined that cumulative transportation impacts would be significant. The cumulative analysis contained in the *Downtown Plan*, *Mission Bay*, and *South of Market Plan EIRs* will be incorporated by reference and summarized in the Pacific Center EIR, and the project's effects in relation to cumulative impacts will be discussed.

5. Noise. Could the project:	Yes	No	Discussed
*a. Increase substantially the ambient noise levels for adjoining areas?	X		X
b. Violate Title 24 Noise Insulation Standards, if applicable?		X	X
c. Be substantially impacted by existing noise levels?		X	X

The noise environment of the site, like all of downtown San Francisco, is dominated by vehicular traffic noise. The *Downtown Plan EIR* indicates a day-night average noise level (L_{dn}) of 73 dBA on Fourth Street and on Market Street near the site in 1984, and predicts a 1 dBA increase to 74 dBA, on both streets in year 2000.[1,2] The Environmental Protection Element of the *Master Plan* contains guidelines for determining the compatibility of various land uses with different noise environments; guidelines are more restrictive for office use than for commercial retail use. For office use, the guidelines recommend no special noise control measures in an exterior noise environment up to an L_{dn} of 70 dBA. For noise levels of 75 dBA and above, the guidelines recommend an analysis of noise reduction requirements and inclusion of noise insulation features in the building design. The project sponsor has indicated that noise insulation measures would be included as part of the design. The proposed structure would not include housing, so Title 24 Noise Standards would not be applicable.

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* Derived from State EIR Guidelines, Appendix G, normally significant effect.

Project operation would not result in perceptibly greater noise levels than those existing in the area. The amount of traffic generated by the project during any hour of the day, and cumulative traffic increases at the time of project completion, would cause traffic noise to increase by 1 dBA or less. To produce a noticeable increase in environmental noise, a doubling of existing traffic volume would be required; traffic increases of this magnitude would not occur with anticipated cumulative development including the project.[3]

The project would be required to comply with the San Francisco Noise Ordinance, *San Francisco Police Code* Section 2909, "Fixed Source Noise Levels," which regulates mechanical equipment noise. The project site and surrounding area are within the C-3-R District. In this district, the ordinance limits equipment noise levels at the property line to 70 dBA between 7:00 a.m. and 10:00 p.m. and 60 dBA between the hours of 10:00 p.m. and 7:00 a.m. During lulls in traffic, mechanical equipment generating 70 dBA could dominate the noise environment at the site. The project engineer and architect would include design features in the building to limit mechanical equipment noise levels to 60 dBA. As equipment noise would be limited to 60 dBA to meet the nighttime limit, it would not be perceptible above the ambient noise levels in the project area. Discussion of operational noise will not be discussed in the EIR.

Building construction would temporarily increase noise in the site vicinity. Impacts of construction noise will be discussed in the EIR.

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1. San Francisco Department of City Planning, *Downtown Plan Environmental Impact Report (EIR)*, EE81.3, certified October 18, 1984. Vol 1, Table IV.J.2.

2. dBA is a measure of sound in units of decibels (dB). The "A" denotes the A-weighted scale, which simulates the response of the human ear to various frequencies of sound. L_{dn}, the day-night average noise level, is a noise measurement based on human reaction to cumulative noise exposure over a 24-hour period, taking into account the greater annoyance of nighttime noises; noise between 10:00 p.m. and 7:00 a.m. is weighted 10dBA higher than daytime noise.

3. See *Downtown Plan EIR* (Vol. 1), Section IV.E. generally and Section IV.J., pp. IV.J.8-18. Increases of 1 dBA or less in environmental noise are not noticeable by most people outside a

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* Derived from State EIR Guidelines, Appendix G, normally significant effect.

laboratory situation (National Academy of Sciences, Highway Research Board, Research Report No. 117 (1971)). (See also *FHWA Highway Traffic Noise Prediction Model*, Report No. FHWA-RD-77-108, December 1978, p.8, regarding doubling of traffic volumes producing increases on 3 dBA or more, which are noticed by most people.)

6.	Air Quality/Climate. Could the project:	Yes	No	Discussed
*a.	Violate any ambient air quality standard or contribute substantially to an existing or projected air quality violation?	X		X
*b.	Expose sensitive receptors to substantial pollutant concentrations?		X	X
c.	Permeate its vicinity with objectionable odors?		X	X
d.	Alter wind, moisture or temperature (including sun shading effects) so as to substantially affect public areas, or change the climate either in the community or region?		X	X

Two types of air quality impacts could be expected from the proposed project: long-term impacts related to use and operation of the project and short-term impacts resulting from construction activity. Project-related and cumulative downtown traffic could be expected to contribute to existing air pollution near the site and will be discussed in the EIR.

Construction activities would temporarily affect local air quality. No materials would be burned during renovation and construction activities, nor would any objectionable odor be created. Renovation and other construction activities would affect local air quality for up to 24 to 28 months, however, by increasing total suspended particulates (TSP). Dustfall could be expected at times on surfaces within 200 to 800 feet. Under high wind conditions exceeding 12 miles per hour (mph), localized effects, including human discomfort, might occur downwind from blowing dust. Construction dust is composed primarily of large particles that settle out of the atmosphere more rapidly with increasing distance from the source. More of a nuisance than a hazard for most people, this dust could affect persons with respiratory diseases, as well as sensitive electronic or communications equipment. The project sponsor would require the contractor to wet down the construction site twice a day during construction to reduce particulates by at least 50 percent (see page 34).

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* Derived from State EIR Guidelines, Appendix G, normally significant effect.

Diesel-powered equipment would emit, in decreasing order by weight, nitrogen oxides, carbon monoxide, sulfur oxides, hydrocarbons, and particulates. This would increase local concentrations temporarily but would not be expected to increase the frequency of violations of air quality standards. The project sponsor would require the project contractor to maintain and operate construction equipment in such a way as to minimize exhaust emissions (see page 34). Construction air quality effects require no further analysis and will not be included in the EIR.

The cumulative effects on air quality of traffic emissions from traffic generated by development in the C-3 districts including the project are analyzed in the *Downtown Plan EIR*. The *Downtown Plan EIR* (No. EE81.3, Final EIR certified October 18, 1984) may be examined at the Department of City Planning, 450 McAllister Street, sixth floor, the San Francisco Main Library and various branch libraries. In certifying the *Downtown Plan EIR*, the City Planning Commission determined that cumulative air quality impacts would be significant. The *Downtown Plan EIR's* cumulative analysis of air quality will be incorporated by reference, and the project's effects in relation to cumulative effects will be discussed. The analysis and conclusions of the *Downtown Plan EIR* remain current regarding future and project conditions.

The project's potential shadowing impacts on sidewalks, parks and other open spaces will be discussed in the EIR. The analysis will include shadow diagrams.

Section 148 of the *City Planning Code* establishes comfort criteria of 11 miles per hour (mph) equivalent wind speed for pedestrian areas and seven mph for seating areas, not to be exceeded more than ten percent of the time, year around between 7:00 a.m. and 6:00 p.m. Project wind effects, including the results of wind tunnel testing and the effects of the project in relation to the *City Planning Code* criteria, will be discussed in the EIR.

7. Utilities/Public Services. Could the project:	Yes	No	Discussed
*a. Breach published national, state or local standards relating to solid waste or litter control?	_	X	_
*b. Extend a sewer trunk line with capacity to serve new development?	_	X	_
c. Substantially increase demand for schools,			

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* Derived from State EIR Guidelines, Appendix G, normally significant effect.

	recreation or other public facilities?	_	X	X
d.	Require major expansion of power, water, or communications facilities?	_	X	X

The *Downtown Plan EIR* concluded that demand for utilities and public services resulting from development in the C-3 Districts under the *Downtown Plan* would not be significant. The project would fall within this development forecast. The *Downtown Plan EIR* analysis remains current and valid for future and project conditions. No analysis of community services is necessary in the EIR.

8.	Biology. Could the project:	Yes	No	Discussed
*a.	Substantially affect a rare or endangered species of animal or plant, or the habitat of the species?	_	X	X
*b.	Substantially diminish habitat for fish, wildlife or plants, or interfere substantially with the movement of any resident or migratory fish or wildlife species?	_	X	_
c.	Require removal of substantial numbers of mature, scenic trees?	_	X	_

The proposed project site is completely covered by existing building and paved surfaces. There are no rare or endangered species or animal habitats on site. These matters will not be discussed further in the EIR.

9.	Geology/Topography. Could the project:	Yes	No	Discussed
*a.	Expose people or structures to major geologic hazards (slides, subsidence, erosion and liquefaction)?	_	X	X
b.	Change substantially the topography or any unique geologic or physical features of the site?	_	X	X

Preliminary recommendations for foundation support of the proposed renovation of the Pacific I building have been provided by Treadwell & Rollo, Inc., California-registered geotechnical engineers.[1] Together with the other sources referenced in this Initial Study, the information can be applied to the three buildings in the proposed project. Detailed foundation and structural design parameters would be established, as appropriate, throughout the various phases of project design. The design parameters would provide information and recommendations for the following items, as needed:

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* Derived from State EIR Guidelines, Appendix G, normally significant effect.

1. The characteristics of the soil beneath portions of the site to be excavated.
2. The appropriate type of foundations for the proposed structure, including reinforcement of foundations for the renovated building.
3. The design criteria for the recommended foundation and for the seismic upgrading of the buildings to remain on-site.
4. The estimated foundation settlement rate, particularly with regard to the foundation for the Pacific I building, which is above the layer of marsh deposit.
5. The necessary subgrade preparation for the lowest basement level of the Pacific I building.
6. The lateral pressures for any retaining walls needed by the new or renovated buildings.
7. The groundwater conditions in the areas of construction at the site.
8. The suitability of on-site soils for use as backfill.
9. The underpinning and shoring design values for adjacent structures that would be affected by the construction.

The site is at an elevation of approximately +20 San Francisco Datum (SFD), and slopes (less than one percent downgrade) to the east.[2,3] The vicinity of the site is underlain by as much as 50 ft. of dune sand, less than 10 ft. of bay mud, 20 to 40 ft. of Colma sand, and about 100 ft. of undifferentiated clay and sand overlying the Franciscan assemblage bedrock about 200 ft. below the ground surface.[4] The project site appears to be underlain by about 20 ft. of loose to medium dense sand (dune sand), three to five ft. of "weak, sensitive marsh deposit" (bay mud), and 34 to 36 ft. of medium dense to very dense sand (Colma sand) over at least 140 ft. of clay, silt and sand.[5] Groundwater levels in the vicinity of the site typically have been measured at between 0 and -5 ft. SFD.[6]

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* Derived from State EIR Guidelines, Appendix G, normally significant effect.

The foundations of the existing Pacific I building appear to rest on dune sand. The mat foundations of the existing Pacific II building and the proposed Pacific III building are supported in the dense sand below the marsh deposit, in engineered fill, which replaced the marsh deposits in some locations, and on drilled piers extended through the marsh deposit where it was not removed. New spread footings and enlarged existing footings would be sufficient to carry the anticipated increased loads of the Pacific I building. Because the strength and density of the dune sand varies greatly, it will be necessary to determine the appropriate bearing pressure value after further exploration and analysis. For preliminary design purposes, however, a midrange value has been recommended that would allow for one inch of total settlement.[7]

Because the marsh deposit is weak and compressible, excessive settlement could occur from the imposition of the increased loads. To avoid this effect, the foundation would be well above the marsh deposit, thus limiting and distributing the stresses. No piles would be driven for temporary shoring or for permanent foundation support.[8] Final recommendations for the foundation would be developed following site-specific subsurface investigation and analysis.[9]

Excavation of a portion of the site would extend to about 13 ft. below the ground surface (+7 ft. SFD) so that the enlarged footings could reinforce the existing foundation of Pacific I. No new excavation would be necessary to gain access to the two existing basement levels at the Pacific III location. Because groundwater would not be encountered during the excavation, dewatering would not be necessary. Shoring, and possibly underpinning, would be needed adjacent to the street. Less than 1,000 cubic yards of material would be excavated for the reinforcement of the existing Pacific I foundations. Removal of some excavated material from the site would be necessary because excavation and standard backfilling volumes are not expected to balance. Spoils would be transported by the most direct truck route to an as-yet-unspecified fill site.[10]

The site is not located in a Special Geologic Study Area for ground failure or hazards.[11] The site would experience strong groundshaking (D on the San Francisco scale) during a great earthquake (Richter magnitude 8+) generated by the San Andreas fault, which is located approximately 9 miles southwest of the project site.[12] The seismic stability of the sand underlying the vicinity of the project site is moderate; that of the mud layer is very low; of the Colma sand, moderate to high; of the deeper clay and sand, moderate to moderately high; and of the bedrock, high.[13] The site

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* Derived from State EIR Guidelines, Appendix G, normally significant effect.

would not be inundated during the 100-year tsunami event, even if the event occurred at the year's highest tides (run-up to -0.8 ft. SFD), or during the 500-year, highest-tide tsunami event (run-up to +2.3 ft. SFD).[14] For informational purposes, cumulative seismicity will be discussed in the EIR.

The project sponsor would follow the recommendations of the foundation and structural reports prepared for the excavation and construction on the site. The buildings would include earthquake-resistant design and utilize materials that meet the seismic engineering standards of the 1989 San Francisco Building Code. For new structures, applicable to Pacific III, the 1989 *San Francisco Building Code* is identical to the 1988 *Uniform Building Code*. For retrofitted structures, applicable to Pacific I and Pacific II, the 1989 *San Francisco Building Code* applies modified formulae to the 1988 *Uniform Building Code* to correct pre-existing conditions. The 1989 *San Francisco Building Code* is designed to allow for some structural damage to buildings, but does not allow for their collapse during a major earthquake (see also Mitigation Measures, pp. 34-35, regarding the project sponsor's emergency response plan).

Mitigation measures listed on pp. 34-36 of this document would be applied to this project. The project would not have a substantial effect on geology or topography; these issues require no further discussion in the EIR.

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1. Treadwell & Rollo, Inc., Consulting Engineers and Scientists, letter report to Whisler-Patri, Architects/Planners, *Geotechnical Engineering Consultations, Pacific 1 Renovation, San Francisco, California*, R.D. Rodgers, GE732, and F.L. Rollo, GE733, 2 August 1991.

2. San Francisco Datum is 8.66 feet above mean sea level.

3. G.J. Burwasser, Geologist, EIP Associates, site observation, 23 September 1991.

4. J.C. Schlocker, *Geology of the San Francisco North Quadrangle, California*, U.S. Geological Survey, Professional Paper 782, Washington, D.C., 1974, 109 pages, 76 figures, 2 plates, map scale 1:24,000.

5. Treadwell & Rollo, 1991, op cit.

6. Treadwell & Rollo, 1991, op cit.

7. Treadwell & Rollo, 1991, op cit.

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* Derived from State EIR Guidelines, Appendix G, normally significant effect.

8. R. Graziano, Whisler-Patri, telephone communication with G.J. Burwasser, EIP Associates, 24 September 1991.

9. Treadwell & Rollo, 1991, op cit.

10. J. Lindell, Dinwiddie Contractors, telephone communication with G.J. Burwasser, EIP Associates, 30 September 1991.

11. *Community Safety Element of the City and County of San Francisco Master Plan*, adopted by Resolution No. 7241 of the San Francisco City Planning Commission, September 12, 1974, 24 pages, 13 figures at various scales.

12. URS/John A. Blume and Associates, *San Francisco Seismic Safety Investigation*, San Francisco, June, 1974, 128 pages, 4 tables, 2 figures (no scale), 122 figures, scale 1:42,667. Groundshaking intensities were projected and classified on a five-point scale ranging from E (Weak) to A (Very Violent).

13. Schlocker, 1974, op cit.

14. A.W. Garcia and J.R. Houston, *Type 16 Flood Insurance Study: Tsunami Predictions for Monterey and San Francisco Bays and Puget Sound*, U. S. Corp of Engineers Technical Report H-75-17, Hydraulics Laboratory, U.S. Army Engineers Waterways Experiment Station, Vicksburg, Mississippi, November, 1975, 263 pages, including 2 tables and 240 figures, scale 1:24,000.

10.	Water. Could the project:	Yes	No	Discussed
*a.	Substantially degrade water quality, or contaminate a public water supply?		X	X
*b.	Substantially degrade or deplete groundwater resources, or interfere substantially with groundwater recharge?		X	X
*c.	Cause substantial flooding, erosion or siltation?		X	X

There is no permanent body of surface water on the site. The site is totally covered by the existing buildings and is impermeable.[1]

The City is currently experiencing no sewer system problems in the project area. An efficient on-site drainage system would be provided, and runoff from the completed project would continue to drain into the combined City storm/sewer system and be treated prior to discharge to the Pacific Ocean. The storm/sewer system has adequate capacity to carry and treat runoff from the completed project site.[2]

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* Derived from State EIR Guidelines, Appendix G, normally significant effect.

Construction of the proposed sublevel for parking would not involve excavation below the water table: dewatering of the site would not be necessary. Any groundwater or stormwater seeping into the excavation would be removed through sump pumping, rather than through deep dewatering wells, because of the small amount of water involved.[3]

The quality of the surface runoff entering the storm/sewer system would not be altered by the contaminant load associated with the project. The driving surfaces of parking structures tend to contain high levels of suspended solids, as well as gasoline and other hydrocarbons, oil and grease, rubber, lead, and other automobile-related contaminants. These materials already exist in the urban environment on streets, drives, parking lots and parking structures such as the one at the Pacific III site. Various quantities of these contaminants are found in urban stormwater runoff. The proposed project would contain covered parking in the same location where it currently exists, and contaminants would enter the drainage system during periodic cleaning of the driving surfaces of the parking levels. The types of contaminants would be substantially the same as those washed from the City streets, although the ratios of particular materials in the contaminant load may vary. The volume of contaminants would not increase because no additional parking would be added to the site. The project would contribute to cumulative degradation of the quality of the water carried and treated by the system; however, the exact amount of each contaminant generated by the proposed project would be too low to be considered significant in itself. To the extent possible, oil separators or similar filtering systems would be included in the catch basin on site to reduce the project's contribution to the cumulative contaminant load being carried and treated by the City system. Catch basins would be cleaned and maintained at least as frequently as required by the Department of Public Works. The project would not have a substantial effect on hydrology; these issues will require no further discussion in the EIR.

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1. G.J. Burwasser, Geologist, EIP Associates, site observation, 23 September 1991.

2. N. Lee, San Francisco Clean Water Program. Telephone communication with G.J. Burwasser, EIP Associates, 3 October 1991.

3. J. Lindell, Dinwiddie Contractors, telephone communication with G.J. Burwasser, EIP Associates, 1 October 1991.

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* Derived from State EIR Guidelines, Appendix G, normally significant effect.

11. Energy/Natural Resources. Could the project:	Yes	No	Discussed
*a. Encourage activities which result in the use of large amounts of fuel, water, or energy, or use these in a wasteful manner?	_	X	X
b. Have a substantial effect on the potential use, extraction, or depletion of a natural resource?	_	X	X

Annual energy consumption by existing uses on the site (i.e., office, wholesale apparel) is approximately 4.42 million kWh of electricity, 6,400 therms of natural gas, and 2.90 pounds of steam, equal to about 19 billion Btu at the point of use.[1,2]

Remodelling of the existing structures would require an unknown amount of energy. Fabrication and transportation of building materials, worker transportation, site development, and building construction would require about 750 billion Btu of gasoline, diesel fuel, natural gas, and electricity, equivalent to 130,000 barrels of oil.[3] Distributed over the estimated 50-year life of the project, this would be about 15 billion Btu per year, or about 20 percent of the annual building energy requirements.

New buildings in San Francisco are required to conform to energy conservation standards specified by Title 24 of the *California Code of Regulations*. Documentation showing compliance with these standards is submitted with the application for the building permit and is enforced by the Bureau of Building Inspection.

Table 1, page 24, shows the estimated operational energy that would be used by the project. Project demand for electricity during PG&E's peak electrical load periods, July and August afternoons, would be about 3,100 kW, an estimated 0.014 percent of PG&E's peak load of 21,397 MW.[4] Project demand for natural gas during PG&E's peak natural gas load periods, January mornings, would be 80 million Btu per day, or about 0.002 percent of PG&E's peak load of about 4.1 billion cubic feet per day.[5] Annual and peak daily electricity and natural gas consumption are shown in Figures 3 and 4, pages 25 and 26.

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* Derived from State EIR Guidelines, Appendix G, normally significant effect.

TABLE 1

ESTIMATED PROJECT ENERGY USE[1,5]

Daily Natural Gas Consumption[2]	
Estimated natural gas consumption per sq. ft.	120 Btu[3]
Estimated total daily natural gas consumption	514 Therms (51.4 million Btu)
Monthly Electric Consumption[2]	
Estimated electrical consumption per sq. ft.	1.36 kWh (13,925 Btu)[4]
Estimated total electrical consumption	593,962 kWh (6.1 billion Btu)
Annual Consumption	
Estimated total annual natural gas consumption	187,800 Therms (18.78 billion Btu)
Estimated total annual electric consumption	7.1 million kWh (73.0 billion Btu)
Estimated total annual energy consumption	91.8 billion Btu (16,386 barrels of oil)

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1. Energy use includes space conditioning, service water heating and lighting.

2. Electricity and natural gas consumption was based on estimates made by EIP Associates. These calculations are available for review at the Department of City Planning 450 McAllister Street, San Francisco.

3. Btu (British thermal unit): A standard unit for measuring heat. Technically, it is the quantity of heat required to raise the temperature of one pound of water one degree Fahrenheit (251.97 calories) at sea level.

4. Energy Conversion Factors:
    one kilowatt hour (kWh) = 10,239 Btu
    one therm = 100,000 Btu
    one barrel oil = 5,600,000 Btu

5. Monthly and annual figures may not match due to rounding to three significant digits.

Source: EIP Associates.

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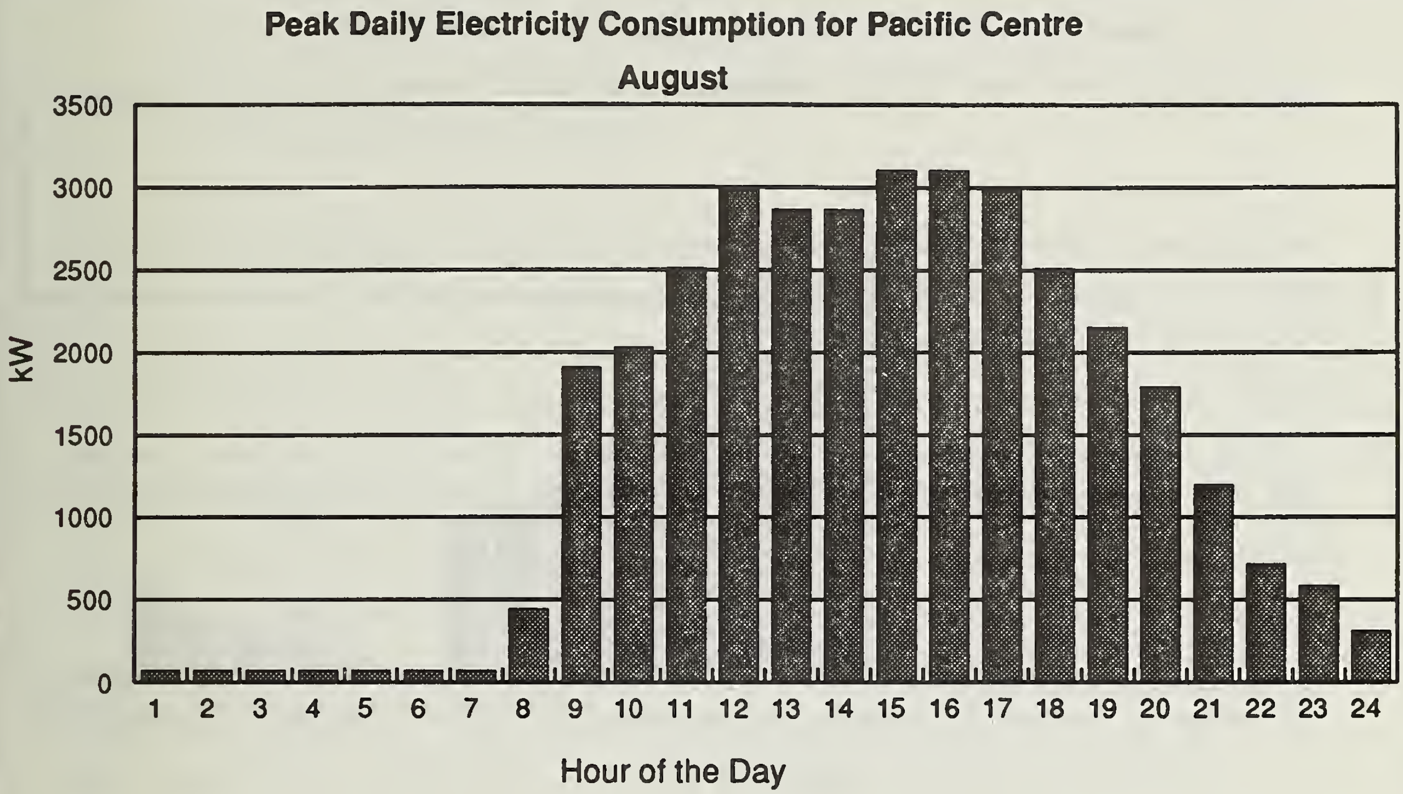
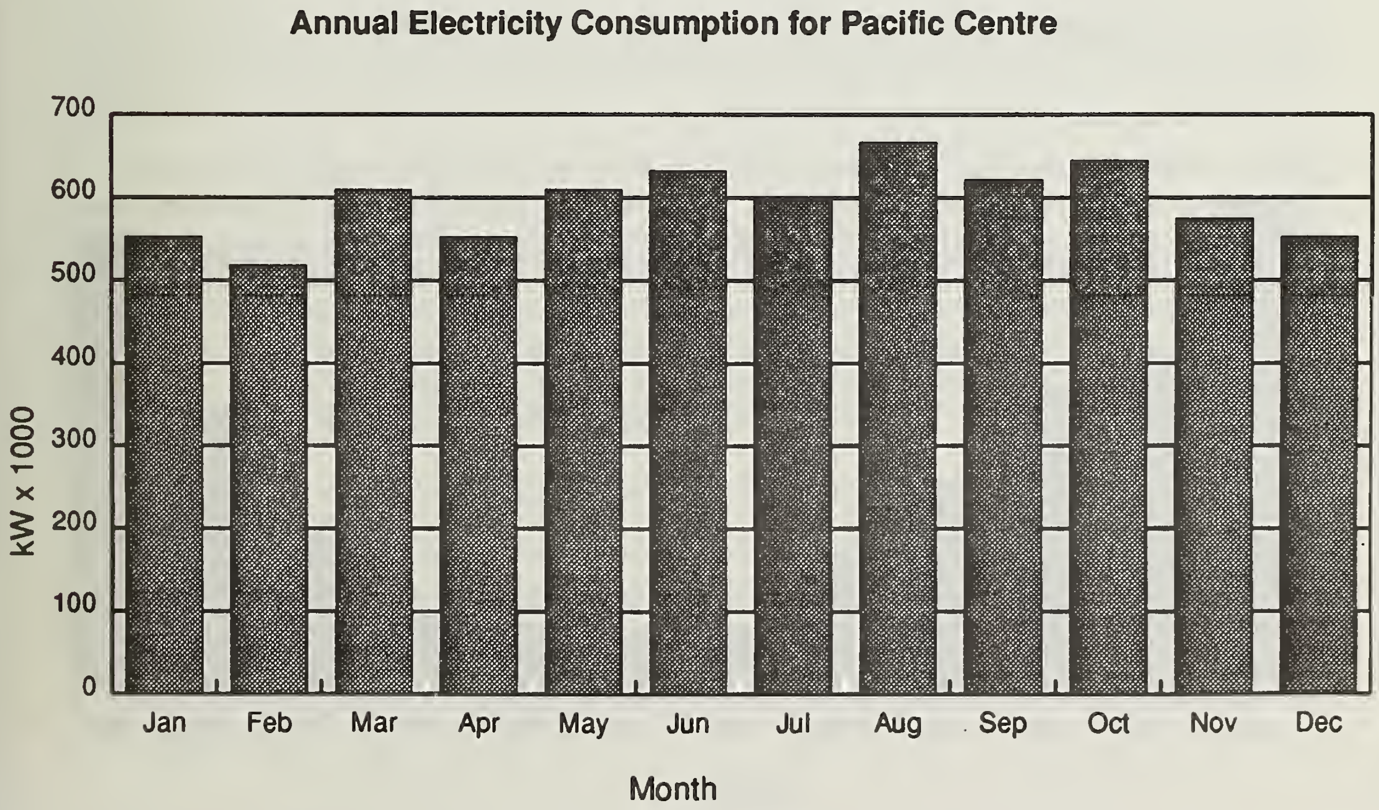
* Derived from State EIR Guidelines, Appendix G, normally significant effect.

ESTIMATED ELECTRICITY PEAK DAY DEMAND
AND ANNUAL CONSUMPTION

FIGURE 3



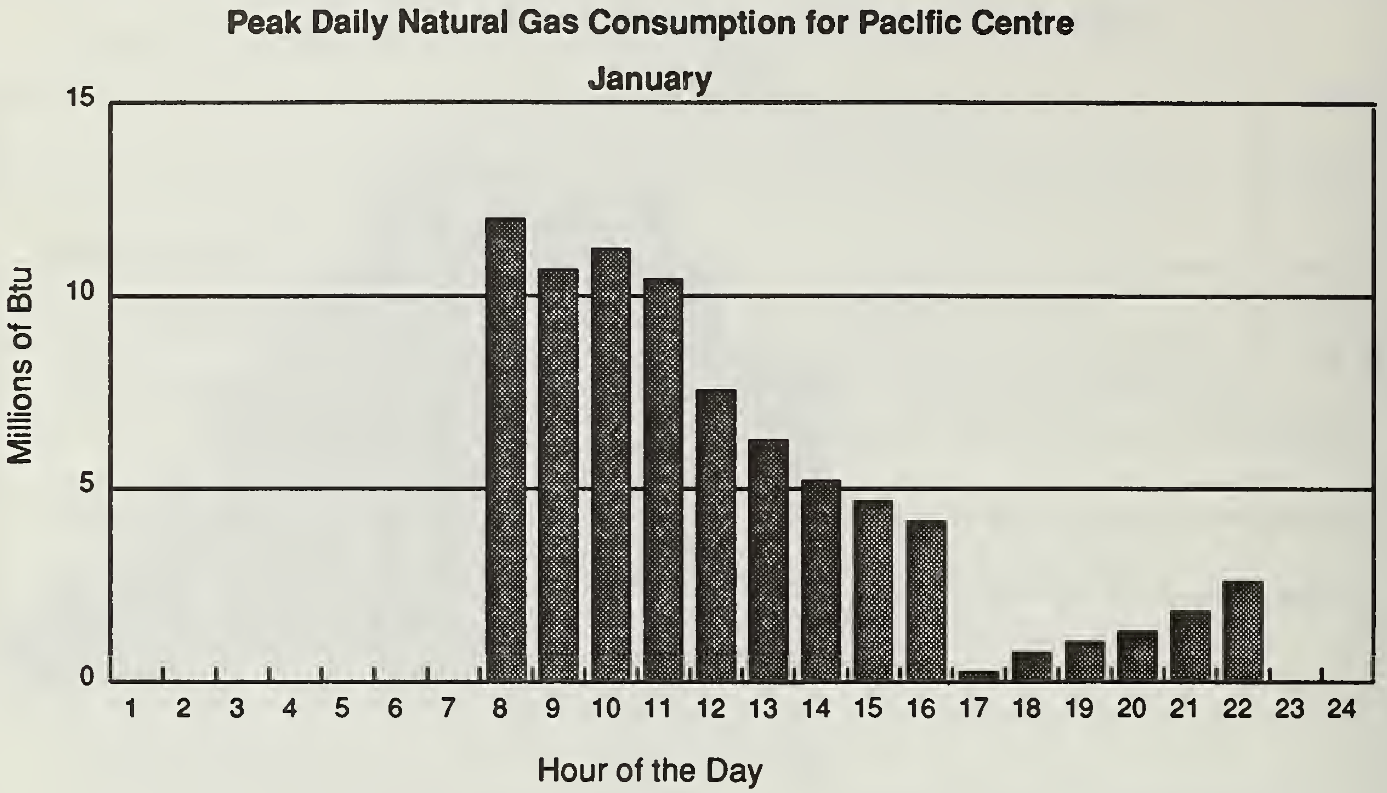


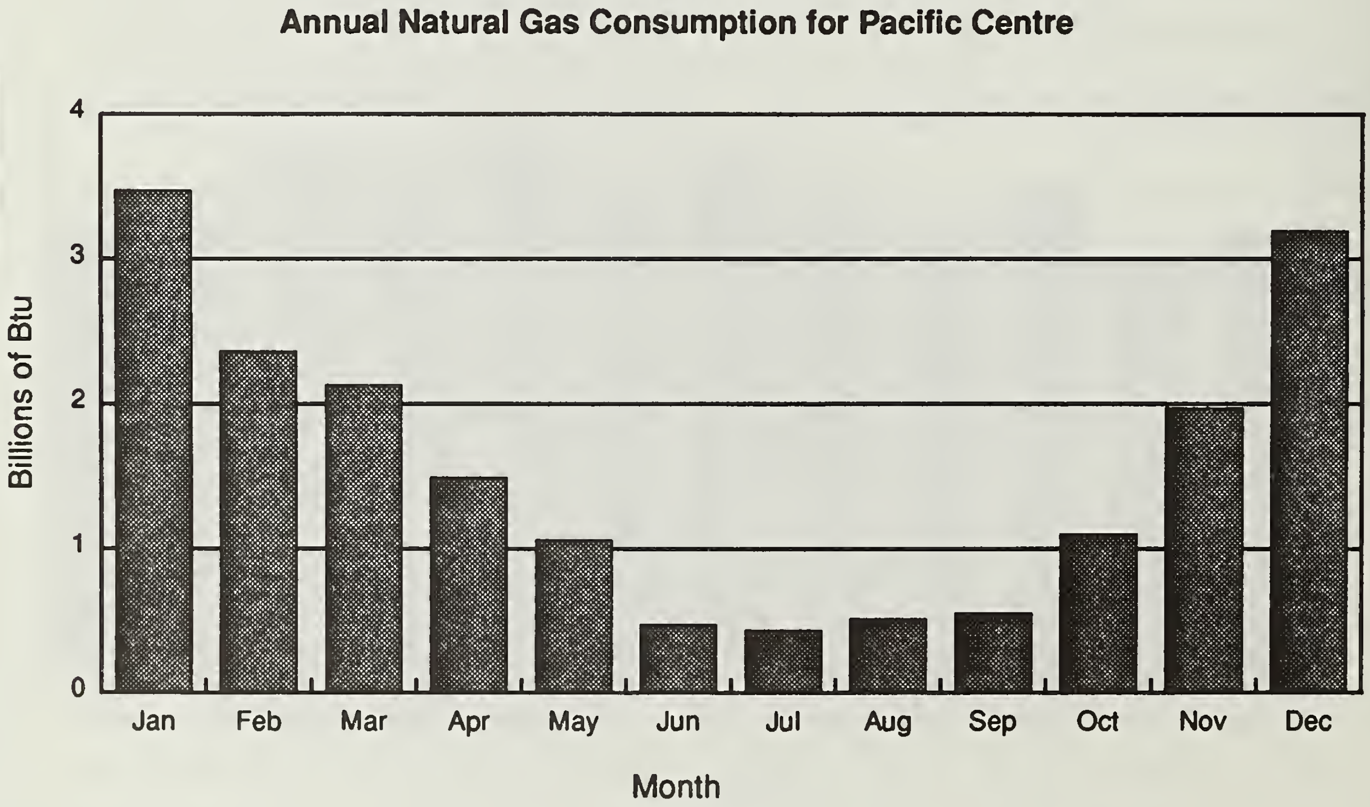
SOURCE: EIP ASSOCIATES

89311

ESTIMATED NATURAL GAS PEAK DAY DEMAND AND ANNUAL GAS LOAD DISTRIBUTION

FIGURE 4





SOURCE: EIP ASSOCIATES

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Increased San Francisco energy demands to the year 2000 would be met by PG&E from nuclear sources, oil and gas facilities, hydroelectric and geothermal facilities, and other sources such as cogeneration, wind and imports. PG&E plans to continue receiving most of its natural gas from Canada and Texas under long-term contracts.

Project-related transportation would cause additional off-site energy consumption. Annual project-related trips (about 1,340,000 auto vehicle trips ends [vte], 540,000 bus person trip ends [pte], 87,000 train pte, 35,000 ferry pte, 160,000 jitney/van/taxi/motorcycle/charter bus pte, 790,000 BART pte, and 1,190,000 Muni electric pte) would require about 900,000 gallons of gasoline and 100,000 gallons of diesel fuel, and about 3.8 million kWh of electricity annually, as indicated in Table 2, page 28. These figures were calculated using data contained in the *Downtown Plan EIR*. The total annual transportation energy demand, converted with at-source factors to a common thermal energy unit, would be about 180 billion Btu, the energy equivalent of 32,500 barrels of oil. This projected use is based upon the mix of highway vehicles in California in 1992. Vehicle fuel use is expected to decrease as the vehicle fleet becomes more efficient and fuel more expensive. This topic, energy impacts, requires no further analysis and will not be discussed in the EIR.

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1. Existing energy use is based on PG&E billings for 1989; at-point-of-use thermal energy, given in British thermal uses (Btu), is based on information received from The Pacific Center, September 20, 1991.

2. The British thermal unit (Btu) is the quantity of heat required to raise the temperature of one pound of water one degree fahrenheit at sea level. The term "at-source" means that adjustments have been made in the calculation of the thermal energy equivalent (Btu) for losses in energy that occur during generation, transmission, and distribution of the various energy forms as specified in: ERCDC, 1977, *Energy Conservation Design Manual for New Non-Residential Buildings*, Energy Conservation and Development Commission, Sacramento, California, and Apostolos, J.A., W.R. Shoemaker, and E.C. Shirley, 1978 *Energy and Transportation System*, California Department of Transportation, Sacramento, California, Project #20-7, Task 8.

3. Hannon, B., et. al, 1978, "Energy and Labor in the Construction Sector, "*Science* 202:837-847 (adjusted for 1991 dollars).

4. Pacific Gas and Electric Company, Form No. 10-K for the Fiscal Year Ending December 31, 1990, page 15.

5. Pacific Gas and Electric Company, Form No. 10-K for the Fiscal Year Ending December 31, 1990, page 19.

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* Derived from State EIR Guidelines, Appendix G, normally significant effect.

TABLE 2

PROJECT-RELATED ANNUAL TRANSPORTATION ENERGY CONSUMPTION[1]

	Electricity (kWh)	Gasoline (Gallons)	Diesel (Gallons)	Total Btu (Millions)
Auto/Taxi/Motorcycle/ Jitney/Charter Bus	---	908,503	---	127,190
BART	3,124,339	---	---	31,990
Muni Electric	635,735	---	---	6,509
Regional Bus System	---	---	83,678	13,388
SPRR	---	---	20,648	3,304
Project Total	3,760,074	908,503	104,326	182,382

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[1] The methods used to calculate these figures are described in detail in the *Downtown Plan EIR*, EE81.3, certified October 18, 1984, in Appendix N. The associated data are contained in Table 6 of that document. Calculations are also based, in part, on vehicle miles traveled (see calculations for the project on file at the Department of City Planning, Office of Environmental Review, 450 McAllister Street). Numbers may not add exactly to totals due to effects of rounding.

Source: EIP Associates.

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* Derived from State EIR Guidelines, Appendix G, normally significant effect.

12. Hazards. Could the project:	Yes	No	Discussed
*a. Create a potential public health hazard or involve the use, production or disposal of materials which pose a hazard to people or animal or plant populations in the area affected?		X	X
*b. Interfere with emergency response plans or emergency evacuation plans?		X	X
c. Create a potentially substantial fire hazard?		X	X

Asbestos-containing materials (ACMs) are present within an existing structure on site, which is proposed to be remodeled as part of the project. The Pacific Building (Pacific I) contains asbestos in insulation of pipes, boilers and water tanks, floor and ceiling tiles and building walls. Any alteration or demolition of the existing buildings necessary for the project must comply with State law, which requires a contractor, where there is asbestos-related work involving 100 square feet or more of asbestos containing materials, to be certified and that certain procedures be followed.[1] The project sponsor would require the project contractor to comply with State regulations for the removal of asbestos in the existing structures. The Bay Area Air Quality Management District (BAAQMD) is vested by the California legislature with authority to regulate airborne pollutants, including asbestos, through both inspection and law enforcement, and is to be notified ten days in advance of any proposed demolition. Such notification must include the names and addresses of operators and persons responsible; description and location of the structure(s) to be renovated or demolished, including size, age and prior use, and the approximate amount of friable[2] asbestos; scheduled starting and completion dates of demolition or renovation; nature of planned demolition and renovation and methods to be employed; procedures to be employed to meet BAAQMD requirements; and the name and location of the waste disposal site to be used. The District randomly inspects asbestos removal operations. In addition, the District will inspect any removal operation for which a complaint has been received.

The local office of the State Occupational Safety and Health Administration (OSHA) must be notified of asbestos abatement to be carried out. Asbestos abatement contractors must follow State regulations contained in 29 CCR 1926.58. Asbestos removal contractors must be certified as suchby the Contractors Licensing Board of the State of California. The owner of the properties where demolition and renovation are to occur must have a Hazardous Waste Generator Number assigned

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* Derived from State EIR Guidelines, Appendix G, normally significant effect.

by and registered with the Office of the California Department of Health Services in Sacramento. The contractor and hauler of the material is required to file a Hazardous Waste Manifest, which details the hauling of the material from the site and its disposal (see pages 34-35). Thus, asbestos removal would not cause public health hazards and requires no further analysis.

Once constructed, the project would not create a health hazard or be affected by hazardous uses.

The project would increase the daytime population in downtown San Francisco. Employees in the proposed building would contribute to congestion if an emergency evacuation of the downtown were required. An evacuation and emergency response plan would be developed as part of the project (see page 34). The project's emergency plan would be coordinated with the City's emergency planning activities. These mitigation measures are proposed as part of the project; thus, this topic will not be discussed in the EIR.

The increased number of persons using the site would not substantially increase the fire hazard at the site because the project would be required to conform to the Life Safety provisions of the *San Francisco Building Code* and Title 24 of the *State Building Code*. The existing buildings on site, including the historic Pacific Building, would be renovated to meet current fire and seismic safety requirements.

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1. Assembly Bill 2040, Asbestos 1985, added Section 24223 and Chapter 25 to Division 20 of the *Health and Safety Code*.

2. Friable: easily crumbled or pulverized.

		Yes	No	Discussed
13.	Cultural. Could the project:			
	*a. Disrupt or adversely affect a prehistoric or historic archaeological site or a property of historic or cultural significance to a community, ethnic or social group; or a paleontological site except as a part of a scientific study?	_	X	X

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* Derived from State EIR Guidelines, Appendix G, normally significant effect.

b. Conflict with established recreational, educational, religious or scientific uses of the area?		X	
c. Conflict with the preservation of buildings subject to the provisions of Article 10 or Article 11 of the *City Planning Code*?		X	X

An archival cultural resources evaluation was prepared for the project by a registered archaeologist, and is summarized below.[1] Available documentary evidence suggests that there is a possibility that Prehistoric/Protohistoric archaeological remains may exist, or may once have existed, within the confines of the subject site. At the beginning of the historic era, the project area was situated in a relatively sheltered hollow, near a steep sand hill, close to the waters of Mission Bay and Mission Creek, as well as Yerba Buena Cove. Previous archaeological research in San Francisco suggests that the present project area and its immediate surroundings would have represented a generally favorable habitat for Native American hunters and gatherers. Before Anglo-Americans altered the natural topography in the second half of the 19th Century, Mission Bay, Mission Creek and Yerba Buena Cove teemed with a variety of floral and faunal resources.

All available evidence suggests that there is little likelihood of recovering cultural resources from the Spanish, Mexican, Early American or Early Gold Rush eras (1776-1852) within the confines of the project site. There is, however, the possibility that Later Gold Rush (1853-1857), and Late 19th Century (1858-1906) cultural resources may exist at one or more locations within the confines of the site. All archival data indicate that between 1776 and the mid-1850s the project area remained in a completely natural state, unoccupied and unexploited. With the population boom that accompanied the Gold Rush, the project area began to quickly fill with the area's first settlers. Following the completion of the filling and grading activities in the 1860s, the subject property developed rapidly. Accordingly, it is possible that architectural remains and/or related cultural features of significance, or potential significance, from the Later Gold Rush and or Late 19th Century eras may lie buried within the confines of the subject site. The project sponsor has agreed to Mitigation Measure 7, the implementation of which would protect such resources should they be encountered.

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* Derived from State EIR Guidelines, Appendix G, normally significant effect.

The San Francisco Department of City Planning conducted a citywide inventory of architecturally significant buildings in 1976. In that inventory, approximately ten percent of the City's entire stock of buildings was awarded a rating for architectural merit ranging from a low of "0" to a high of "5." The total number of buildings which were rated from "3" to "5" represents less than two percent of the City's entire stock of buildings.

The Foundation for San Francisco's Architectural Heritage conducted a survey that assigned ratings to buildings in the C-3 district. The survey rated buildings from a high of "A" (Highest Importance) to "D" (Minor or No Importance). The criteria used in the evaluation were based on guidelines established by the National Trust for Historic Preservation, the National Register of Historic Places, and the State Historic Resources Inventory.

The *Downtown Plan* categorizes historically and architecturally significant buildings into either Category I or II (significant buildings) or Category III or IV (contributory buildings). Portions of the C-3 District have also been designated as Conservation Districts due to the substantial concentrations of buildings therein, that together create subareas of special architectural and aesthetic importance. It is the intent of the *Downtown Plan* that rated buildings and conservation districts would be protected within the C-3 area.

Two structures occupy the project site: the 1907 Pacific Building at the corner of Fourth and Market Streets, and the 22 Fourth Street building, constructed in 1980. The Pacific Building is a Significant Building-Category I in the Downtown Plan. Category I of the *Downtown Plan* includes 251 buildings considered of the highest architectural and environmental importance. This building is also rated "4" in the citywide inventory of 1976, and is rated "A" by Heritage. The 22 Fourth Street building is not rated. A portion of the proposed project site is in the Kearny-Market-Mason-Sutter Conservation District, as designated in Article 11 of the *City Planning Code*.

The interior of the Pacific Building would be extensively renovated for retail use, and would be integrated as a single structure with the adjacent 22 Fourth Street building and the proposed ten-story Pacific III building. During the remodelling phase of construction, the structures would be brought up to current seismic and fire safety standards. The project sponsor intends to rehabilitate and restore the north and east facades of the Pacific Building to resemble their original design and use of materials. A permit to alter a significant building, pursuant to *City Planning Code* Sections 1111-1111.6, would be required prior to the commencement of construction.

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* Derived from State EIR Guidelines, Appendix G, normally significant effect.

This issue, architectural resources impacts and the permit process, will be discussed in greater detail in the EIR.

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1. Archeo-Tec, *Archival Cultural Resources Evaluation of the Proposed Pacific Center Development Project, San Francisco, California*, June 1991. A copy of this report is on file and available for public review at the Department of City Planning, 450 McAllister Street, San Francisco.

C. OTHER	Yes	No	Discussed
Require approval of permits from City Departments other than Department of City Planning or Bureau of Building Inspection or from Regional, State or Federal Agencies?		X	

D. MITIGATION MEASURES	Yes	No	N/A	Discussed
1. Could the project have significant effects if mitigation measures are not included in the project?	X			X
2. Are all mitigation measures necessary to eliminate significant effects included in the project?	X			X

The following are mitigation measures related to topics determined to require no further analysis in the EIR. The EIR will contain a mitigation chapter describing these and other measures that would or could be adopted to reduce potential adverse effects of the proposed project identified in the EIR.

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* Derived from State EIR Guidelines, Appendix G, normally significant effect.

MITIGATION MEASURES INCLUDED AS PART OF THE PROJECT:

1. A detailed foundation and structural design study would be conducted for the building by a California-licensed structural engineer and a geotechnical consultant. The project sponsor would follow the recommendations of these studies during the final design, excavation and construction of the project.

2. The project sponsor would require the general contractor to sprinkle demolition sites with water continually during demolition activity; sprinkle unpaved construction areas with water at least twice per day to reduce dust generation by about 50 percent; cover stockpiles of soil, sand, and other such material; cover trucks hauling debris, soil, sand, or other such material; and sweep streets surrounding demolition and construction sites at least once per day to reduce TSP emissions. The project sponsor would require the general contractor to maintain and operate construction equipment so as to minimize exhaust emissions of TSP and other pollutants, by such means as a prohibition on idling motors when equipment is not in use or when trucks are waiting in queues, and implementation of specific maintenance programs (to reduce emissions) for equipment that would be in frequent use for much of the construction period.

3. An evacuation and emergency response plan would be developed by the project sponsor or building management staff, in consultation with the Mayor's Office of Emergency Services, to ensure coordination between the City's emergency planning activities and the project's plan, and to provide for building occupants in the event of an emergency. The project's plan would be reviewed by the Office of Emergency Services and implemented by building management insofar as feasible before issuance of final building permits by the Department of Public Works.

4. To expedite implementation of the City's emergency response plan, the project sponsor would prominently post information for building occupants concerning what to do in the event of a disaster.

5. A preliminary inspection of the existing buildings for asbestos has been made, and a final report will be prepared. Included in the final report would be a plan for the safe removal

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* Derived from State EIR Guidelines, Appendix G, normally significant effect.

and disposal of any asbestos found in the buildings exceeding allowable levels under applicable State law. A copy of this report would be submitted to the Bay Area Air Quality Management District (BAAQMD), and any other appropriate State agency, and evidence of this submittal transmitted to the Department of City Planning before the commencement of asbestos abatement. The project sponsor would comply with applicable State law regulating asbestos removal and disposal.

6. Should evidence of cultural or historic artifacts or features of potential significance be found during project excavation, the Environmental Review Officer (ERO) and the President of the Landmarks Preservation Advisory Board (LPAB) would be notified immediately, and any excavation which could damage such artifacts or features halted. The project sponsor would select an archaeologist to assist the Office of Environmental Review in determining the significance of the find. The archaeologist would prepare a report to be submitted to the ERO and the President of the LPAB containing an assessment of the potential significance of the find and recommendations for what measures should be implemented, including an appropriate security program, and a program for the preservation and recovery of any potential artifacts/features. The ERO would then recommend specific mitigation measures, including submittal of written reports to the ERO, if necessary.

Excavation or construction activities which might damage discovered cultural resources would be suspended for a total maximum of four weeks over the course of construction to permit inspection, recommendation and retrieval, if appropriate.

The archaeologist would prepare a draft report documenting the artifacts/features that were discovered, an evaluation as to their significance, and a description as to how any archaeological testing, exploration and/or recovery program was conducted. Copies of the draft reports prepared according to these mitigation measures would be sent first and directly to the Environmental Review Officer and to the President of the Landmarks Preservation Advisory Board for review. Following approval of the report by the ERO and the President of LPAB, a final report is to be sent to the California Archaeological Site Survey Office at Sonoma State University, the Foundation for San Francisco's Architectural

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* Derived from State EIR Guidelines, Appendix G, normally significant effect.

Heritage and the State Office of Historic Preservation. The Office of Environmental Review shall receive three copies of the final archaeological findings report.

E. ALTERNATIVES

Alternatives to the proposed project include:

A. No Project: The site would remain in its existing condition. There would be no renovation, seismic or architectural rehabilitation, or new construction. A variation of this alternative would be No Project, but would include seismic rehabilitation.

B. Alternate Mix Project: A project with an alternative mix of retail and office.

C. Smaller Project: A project with a smaller amount of retail and office space.

D. Underground Transit Connection: A project with the same amount of retail and office space as the proposed project, and including a subterranean connection to the Powell BART/MUNI Station.

E. Alternative Use Project: A project with retail and office space, and seven to ten movie theaters. This alternative would have the same gross square footage as the proposed project.

F: Pedestrian Bridge: A project with the same amount of retail and office space as the proposed project, and including a pedestrian bridge connecting Pacific III with the Fifth and Mission parking garage.

These alternatives and their potential impacts will be discussed in the EIR.

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* Derived from State EIR Guidelines, Appendix G, normally significant effect.

F. MANDATORY FINDINGS OF SIGNIFICANCE	Yes	No	Discussed
*1. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or pre-history?	__	X	__
*2. Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals?	__	X	__
*3. Does the project have possible environmental effects which are individually limited, but cumulatively considerable? (Analyze in the light of past projects, other current projects, and probable future projects.)	__	X	__
*4. Would the project cause substantial adverse effects on human beings, either directly or indirectly?	__	X	__

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* Derived from State EIR Guidelines, Appendix G, normally significant effect.

G. ON THE BASIS OF THIS INITIAL STUDY:

___ I find the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared by the Department of City Planning.

___ I find that although the proposed project could have a significant effect on the environment, there WILL NOT be a significant effect in this case because the mitigation measures, numbers __ in the discussion have been included as part of the proposed project. A NEGATIVE DECLARATION will be prepared.

_X_ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

Barbara W. Sahm

BARBARA W. SAHM
Environmental
Review Officer
for
Dean L. Macris
Director of Planning

Date: 2/26/92

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* Derived from State EIR Guidelines, Appendix G, normally significant effect.

INITIAL STUDY DISTRIBUTION LIST

REGIONAL AGENCIES

Bay Area Air Quality Management District
    Irwin Mussen

CITY AND COUNTY OF SAN FRANCISCO

Landmarks Preservation Advisory Board
    Vincent Marsh

GROUP AND INDIVIDUALS

AIA
    San Francisco Chapter

Artists Equity Association
    Richard Mayer

Sunset Action Committee
    John Bardis

Bay Area Council

California State University - Chico
    Albert Beck

Bendix Environmental Research, Inc.

Blayney-Dyett
    Michael Dyett

Cahill Contractors, Inc.
    Jay Cahill

Chinatown Resource Center

Coalition for San Francisco Neighborhoods
    Dorice Murphy

Joseph Cortiz

DKS Associates

Downtown Association
    Lee Dolson

EIP Associates
    Cathy Brown

Environmental Science Associates, inc.

Food and Fuel Retailers for Economic Equality
    Doug Stevens

The Foundation for San Francisco's Architectural Heritage
    Mark Ryser

Gensler and Associates
    Peter Gordon

Mayor's Office of Business
    David Heindel, Real Estate Specialist

Sue Hestor

The Jefferson Company

Leland, Parachini, et. al.
    Craig Kepler

Legal Assistance to the Elderly
    Brent Kato

Nichols-Berman
    Louise Nichols

Olympia & York
    Sharon Lee Polledri

Pillsbury, Madison & Sutro
    Susan Pearlstine

Planning Analysis & Development
    Gloria Root

G. Bland Platt

Capital Planning Department, UCSF
    Bob Rhine

San Francisco Beautiful
    Donna Casey, Executive Director

San Francisco Building & Construction Trades Council
    Stanley Smith

San Francisco Chamber of Commerce

San Francisco Convention and Visitors Bureau
    George D. Kirkland

San Francisco Labor Council
    Walter Johnson

San Francisco Planning & Urban Research Association (SPUR)

San Franciscans for Reasonable Growth
    David Jones

San Francisco Tomorrow
    Tony Kilroy

Sedway Cooke Associates

Sierra Club
    John Holtzclaw

Square One Film & Video

Tenants and Owners Development Corp.
    John Elberling

Jon Twitchell Associates

Council of Community Housing Organizations
    Calvin Welch

Whisler-Patri
    Marie Zeller

ADJACENT PROPERTY OWNERS

Cal. S&L Co.
R.B. Applegate

Edward Litke

Ann O'Neill

Gerson I. Fox & David Blum

Mary Stebbins

Academy of Science
333 Market Street Ltd. Partnership

Mosser Victorian Hotel

Bank of America, NT, SA

Humboldt Associates

San Francisco Redevelopment Agency

Hayes Hosiery, Inc.

San Francisco Bay Area Rapid Transit Co.

First Savings and Loan Association

San Jacinto Savings Association

790 Market Street Associates Ltd.

MEDIA

Associated Press
Bill Shiffman

KPOO - FM
Leland S. Meyerzone

San Francisco Bay Guardian
Patrick Douglas, City Editor

San Francisco Business Times
Tim Turner

San Francisco Chronicle
Martin Halstuk

San Francisco Examiner
Gerald Adams

The Sun Reporter

Tenderloin Times
Rob Waters

LIBRARIES

Document Library
City Library - Civic Center
Faith Van Liere

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Stanford University Libraries
Jonsson Library of Government Documents
State & Local Documents Division

Government Publications Department
San Francisco State University

Hastings College of the Law - Library

Institute of Government Studies
University of California - Berkeley

PROJECT SPONSOR

Pacific Center Associates
Ahmanson Commercial Development Co.
Monroe Townsend, Project Manager

PROJECT ARCHITECT

Whisler-Patri
Piero Patri, FAIA

PROJECT ATTORNEY

Pettit & Martin
Robert Thompson, Esq.

APPENDIX B: ARCHITECTURAL RESOURCES

ARCHITECTURAL EVALUATION SURVEYS

The architectural ratings discussed in the text of this report (see Section III.B., p. 43), represent the results of three separate architectural surveys. The *Downtown Plan* categories are provided for informational purposes only.

SAN FRANCISCO DEPARTMENT OF CITY PLANNING INVENTORY

Between 1974 and 1976, the San Francisco Department of City Planning conducted a citywide inventory of architecturally significant buildings. An advisory review committee of architects and architectural historians assisted in the final determination of ratings for the 10,000 buildings, the results of which were entered in an unpublished 60-volume record of the inventory. The rated buildings are also represented on a set of color-coded maps which identify the location and relative significance of each building surveyed. The inventory and maps are on file at the Department of City Planning.

The inventory assessed the architectural significance of the surveyed structures from the standpoint of overall design and particular design features. Both contemporary and older buildings were included, but historical associations were not considered. Each building was given two numerical ratings, for architectural quality and for overall architectural significance, urban design context, and environmental significance. The latter rating is referred to in this report. The ratings ranged from a low of "0" to high of "5". The architectural survey resulted in a listing of the best 10% of San Francisco's buildings. In the estimation of the inventory participants, buildings rated "3" or higher represent approximately the best two percent of the City's architecture.

HERITAGE SURVEY

The Foundation for San Francisco's Architectural Heritage, through its consultants, Charles Hall Page & Associates, Inc., conducted an architectural and historical survey of all downtown structures. In 1979, the original inventory results were published in the book *Splendid Survivors* (Foundation for San Francisco's Architectural Heritage, *Splendid Survivors*, California Living Books, San Francisco, 1979). A subsequent 1982 Heritage survey evaluated all structures in the C-3 zoning districts in areas not covered in the *Splendid Survivors* survey ("San Francisco downtown Architectural Survey: C-3 Zoning District, Final Evaluated List", December 1, 1982). The expanded inventory has not been formally published by Heritage. Criteria considered in rating the buildings for both surveys include Architectural Significance, Historic Context and Negative Alterations. Summary ratings from "A" to "D" were assigned to each building on the basis of these scores. The summary ratings, as described on pp. 12-13 of *Splendid Survivors*, are listed below:

A. "Highest Importance. Individually the most important buildings in downtown San Francisco, distinguished by outstanding qualities of architecture, historical values, and relationship to the environment. All A-group buildings are eligible for the National Register, and of highest priority for City Landmark status."

B. "Major Importance. Buildings which are of individual importance by virtue of architectural, historical, and environmental criteria. These buildings tend to stand out for their overall quality rather than for any particular outstanding characteristic. B-group buildings are eligible for the National Register, and of secondary priority for City Landmark status."

The Landmarks Preservation Advisory Board does not distinguish between "A" rated and "B" rated buildings for purposes of preservation.

C. "Contextual Importance. Buildings which are distinguished by their scale, materials, compositional treatment, cornice and other features. They provide the setting for more important buildings and they add visual richness and character to the downtown area. Many C-group buildings may be eligible for the National Register as part of historic districts."

D. "Minor or No Importance. Building which are insignificant examples of architecture by virtue of original design, or more frequently, insensitive remodeling. The category includes vacant buildings and parking lots. Most D-group buildings are sites of opportunity."

Not Rated. Buildings which have been built or suffered insensitive exterior remodeling since 1945.

ARCHITECTURALLY AND/OR HISTORICALLY SIGNIFICANT BUILDINGS IN THE DOWNTOWN

The City Planning Commission adopted by Resolution No. 8600 (May 29, 1980), a "List of Architecturally and/or Historically Significant Buildings in The Downtown," based on the above described surveys. Generally, buildings rated "3" or higher in the DCP survey or "A" or "B" in the original Heritage survey (*Splendid Survivors*) were placed on the list. The expanded Heritage survey (1982) has not been adopted by the City Planning Commission to date.

The purpose of the list is to advise developers and building owners of the importance the City places upon the buildings' conservation and to require special review by the Commission of any plans which would affect any building or buildings on the list. Resolution No. 9240 (November 19,1981) reaffirms the Commission's concern for preservation of architecturally significant buildings and acknowledges the Director's intent to recommend denial of projects that propose to demolish significant buildings. No buildings on the project site are included on this list.

DOWNTOWN PLAN CATEGORIES

The *Downtown Plan* establishes four categories of architecturally important structures. The *Plan* states (p. 66) "This Plan proposes a preservation strategy that would require that 271 buildings (called significant buildings in this Plan) be retained, while providing incentives to encourage the retention of 223 other important, but less significant buildings (called contributory buildings). They are shown on Map 12 in the Plan. Both classes of buildings would be entitled to 'Transferable Development Rights.'"

The following material, taken from the *Plan*, describes the categories and briefly identifies preservation strategies.

Significant Buildings

Those buildings of the highest architectural and environmental importance--buildings whose demolition would constitute an irreplaceable loss to the quality and character of downtown--would be required to be retained. There are 271 of these buildings. They include all buildings rated by Heritage as excellent in either architectural quality or relationship to the environment, or very good in both. (This covers all buildings rated "A" by Heritage and most of the buildings rated "B".)

These buildings--referred to in the *Plan* as significant buildings--are divided into Category I and Category II, the difference being in the extent of alteration allowed . . . . There are 235 significant buildings in Category I ([listed] in Table 4 [of the *Plan*]) and 37 significant buildings in Category II . . . .

Contributory Buildings

The *Downtown Plan* proposes to encourage, but not require, retention of other buildings contributing to the quality and character of downtown. These buildings, called contributory buildings, consist of two groups:

Category III

Buildings rated very good in architectural quality, but lower than very good in relationship to the environment, or vice versa, and located outside conservation districts. (These buildings were rated "b" by Heritage.) There are 21 of these buildings. They are listed on Table 6 [of the *Plan*].

Category IV

Buildings rated very good in architectural quality, but lower than very good in relationship to the environment or vice versa and which are located in a conservation district. (These buildings were rated"B" by Heritage.) there are 15 of them.

> Buildings with "contextual value" to a conservation district. These contextual buildings are buildings that themselves are not highly rated in architectural quality and relationship to the environment, but do make a substantial contribution to the "quality" of an area that contains a number of highly-rated buildings and that is proposed to be given special protection as a conservation district. (These buildings were rated "C" by Heritage.) The 201 Category IV buildings are listed in Table 7 [of the *Plan*].

Six conservation districts are established by the *Plan*:

District 1: Kearny-Market-Mason-Sutter Conservation District
District 2: New Montgomery-Second Street Conservation District
District 3: Commercial-Leidesdorff Conservation District
District 4: Front-California Conservation District
District 5: Kearny-Belden Conservation District
District 6: Pine-Sansome Conservation District

The *Downtown Plan* does not allow transfer of development right to parcels when such transfer would result in the substantial alteration or demolition of a Significant or Contributory Building.

APPENDIX C: TRANSPORTATION

INTERSECTION ANALYSIS

The capacity analysis of each intersection at which a turning movement count was made used the "critical lane" method. This method of capacity calculation is a summation of maximum conflicting approach lane volumes that gives the capacity of an intersection in vehicles per hour per lane. (This method is explained in detail in an article entitled *Intersection Capacity Measurement Through Critical Movement Summations: A Planning Tool*, by Henry B. McInerey and Stephan G. Peterson, January 1971, *Traffic Engineering*. This method is also explained in *Interim Materials on Highway Capacity, Transportation Research Circular No. 212*, Transportation Research Board, January 1980). The maximum service volume for Level of Service E was assumed as intersection capacity. A service volume is the maximum number of vehicles that can pass an intersection during a specified time period in which operating conditions are maintained corresponding to the selected and specified Level of Service (see Table C-1). For each intersection analyzed, the existing peak-hour volume was computed and a volume-to-capacity (V/C) ratio calculated by dividing the existing volume by the capacity at Level of Service E.

PEDESTRIAN ANALYSIS

Pedestrian levels of service were calculated using the Transportation Research Board's *Highway Capacity Manual* (National Research Council, Washington, D.C., 1985). For pedestrian crosswalks, pedestrian flow rates, or the number of pedestrians passing a point per unit of time, are the basis for the flow regime designation. The flow rate is calculated using the width of the crosswalk and the number of pedestrians using the crosswalk per peak 15-minute period. Qualitatively, the flow regime indicates the "freedom to choose desired speeds and to bypass others." Table C-2 shows the relationship between pedestrian flow rates and the flow regimes (categories) used to describe levels of operation.

TABLE C-1

VEHICULAR LEVELS OF SERVICE AT SIGNALIZED INTERSECTIONS

Level of Service	Description	Volume/ Capacity (v/c) Ratio[1]
A	Level of Service A describes a condition where the approach to an intersection appears quite open and turning movements are made easily. Little or no delay is experienced. No vehicles wait longer than one red traffic signal indication. The traffic operation can generally be described as excellent.	less than 0.60
B	Level of Service B describes a condition where the approach to an intersection is occasionally fully utilized and some delays may be encountered. Many drivers begin to feel somewhat restricted within groups of vehicles. The traffic operation can generally be described as very good.	0.61-0.70
C	Level of Service C describes a condition where the approach to an intersection is often fully utilized and back-ups may occur behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so. The driver occasionally may have to wait more than one red traffic signal indication. The traffic operation can generally be described as good.	0.71-0.80
D	Level of Service D describes a condition of increasing restriction causing substantial delays and queues of vehicles on approaches to the intersection during short times within the peak period. However, there are enough signal cycles with lower demand such that queues are periodically cleared, thus preventing excessive back-ups. The traffic operation can generally be described as fair.	0.81-0.90
E	Capacity occurs at Level of Service E. It represents the most vehicles that any particular intersection can accommodate. At capacity there may be long queues of vehicles waiting upstream of the intersection and vehicles may be delayed up to several signal cycles. The traffic operation can generally be described as poor.	0.91-1.00
F	Level of Service F represents a jammed condition. Back-ups from locations downstream or on the cross street may restrict or prevent movement of vehicles out of the approach under consideration. Hence, volumes of vehicles passing through the intersection vary from signal cycle to signal cycle. Because of the jammed condition, this volume would be less than capacity.	1.01+

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[1] Capacity is defined as Level of Service E.

Source: EIP Associates., from *Transportation Research Circular No. 212*, Transportation Research Board, 1980.

TABLE C-2

PEDESTRIAN FLOW REGIMEN

Flow Regime	Choice	Conflicts	Flow Rate (p/f/m)[1]
Open	Free Selection	None	less than 0.5
Unimpeded	Some Selection	Minor	0.5 to 2.0
Impeded	Some Selection	High Indirect Interaction	2.1 to 6.0
Constrained	Some Restriction	Multiple	6.1 to 10.0
Crowded	Restricted	High Probability	10.1 to 14.0
	Design Limit - Upper Limit Of Desirable Flow		
Congested	All Reduced	Frequent	14.1 to 18.0
Jammed	Shuffle Only	Unavoidable	Not applicable[2]

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[1] P/F/M = Pedestrians per foot of effective sidewalk width per minute.
[2] For Jammed Flow, the (attempted) flow rate degrades to zero at complete breakdown.

Source: *Urban Space for Pedestrians*, MIT Press, 1976, Cambridge, MA.

TABLE C-3

PEDESTRIAN LOS DEFINITIONS

Level of Service	Description	Pedestrian Space/ Flow Rate
A	At walkway LOS A, pedestrians basically move in desired paths without altering their movements in response to other pedestrians. Walking speeds are freely selected, and conflicts between pedestrians are unlikely.	≥ 30 sq. ft./ped./ ≤ 2 ped./min./ft.
B	At LOS B, sufficient area is provided to allow pedestrians to freely select walking speeds, to bypass other pedestrians, and to avoid crossing conflicts with others. At this level, pedestrians begin to be aware of other pedestrians, and to respond to their presence in the selection of walking path.	≥ 40 sq. ft./ped./ ≤ 7 ped./min./ft.
C	At LOS C, sufficient space is available to select normal walking speeds, and to bypass other pedestrians in primarily unidirectional streams. Where reverse-direction or crossing movements exist, minor conflicts will occur, and speeds and volume will be somewhat lower.	≥ 24 sq. ft./ped./ ≤ 10 ped./min./ft.
D	At LOS D, freedom to select individual walking speed and to bypass other pedestrians is restricted. Where crossing or reverse-flow movements exist, the probability of conflict is high, and its avoidance requires frequent changes in speed and position. The LOS provides reasonably fluid flow; however, considerable friction and interaction between pedestrians is likely to occur.	≥ 15 sq. ft./ped./ ≤ 15 ped./min./ft.
E	At LOS E, virtually all pedestrians would have their normal walking speed restricted, requiring frequent adjustment of gait. At the lower range of this LOS, forward movement is possible only by "shuffling." Insufficient space is provided for passing of slower pedestrians. Cross- or reverse-flow movements are possible only with extreme difficulties. Design volumes approach the limit of walkway capacity, with resulting stoppages and interruptions to flow.	≥ 6 sq. ft./ped./ ≤ 25 ped./min./ft.
F	At LOS F, all walking speeds are severely restricted, and forward progress is made only by "shuffling." There is frequent, unavoidable contact with other pedestrians. Cross- and reverse-flow movements are virtually impossible. Flow is sporadic and unstable. Space is more characteristic of queued pedestrians than of moving pedestrian streams.	≤ 6 sq. ft./ped./ variable

Sources: *Highway Capacity Manual, Special Report No. 209*, Transportation Research Board, National Research Council, Washington, D.C., 1985, Chapter 13; and Korve Engineering; EIP Associates.

TABLE C-4
PASSENGER LEVELS OF SERVICE ON BUS TRANSIT

Level of Service	Description	Passengers per Seat
A	Level of Service A describes a condition of excellent passenger comfort. Passenger loadings are low with fewer than half the seats filled. There is little or no restriction on passenger maneuverability. Passenger loading times do not affect scheduled operation.	0.00-0.50
B	Level of Service B is in the range of passenger comfort with moderate passenger loadings. Passengers still have reasonable freedom of movement on the transit vehicle. Passenger loading times do not affect scheduled operations.	0.51-0.75
C	Level of Service C is still in the zone of passenger comfort, but loadings approach seated capacity and passenger maneuverability on the transit vehicle is beginning to be restricted. Relatively satisfactory operating schedules are still obtained as passenger loading times are not excessive.	0.76-1.00
D	Level of Service D approaches uncomfortable passenger conditions with tolerable numbers of standees. Passengers have restricted freedom to move about on the transit vehicle. Conditions can be tolerated for short periods of time. Passenger loadings begin to affect schedule adherence, as the restricted freedom of movement for passengers requires longer loading times.	1.01-1.25
E	Level of Service E passenger loadings approach manufacturers' recommended maximums and passenger comfort is at low levels. Freedom to move about is substantially diminished. Passenger loading times increase as mobility of passengers on the transit vehicle decreases. Scheduled operation is difficult to maintain at this level. Bunching of buses tends to occur, which can rapidly cause operations to deteriorate.	1.26-1.50
F	Level of Service F describes crush loadings. Passenger comfort and maneuverability are extremely poor. Crush loadings lead to deterioration of scheduled operations through substantially increased loading times.	1.51-1.60

Source: EIP Associates, from information in the *Interim Materials on Highway Capacity*, Transportation Research Circular 212, pp. 73-113, Transportation Research Board, 1980.

Pacific Center

Retail Mode Split Summary

Table C-5 (1 of 4)

Origins	Mode Split	Typical Weekday Midday		Typical Weekday P M		Typical Weekend Midday		Holiday Weekday Midday		Holiday Weekday P M		Holiday Weekend Midday	
		Percent	Trips	Percent	Trips	Percent	Trips	Percent	Trips	Percent	Trips	Percent	Trips
SW S.F.	Percent	5.7%		9.4%		10.8%		8.4%		8.4%		7.5%	
	Auto	46.8%	130	37.5%	153	42.5%	330	36.5%	200	46.6%	213	51.8%	579
	Taxi	0.0%	0	0.0%	0	4.5%	35	0.9%	5	3.4%	16	1.8%	20
	MUNI	46.8%	130	48.9%	199	42.5%	329	49.6%	272	42.0%	193	37.5%	419
	BART	1.6%	5	6.8%	27	3.0%	23	8.7%	48	4.5%	21	6.3%	70
	Walk	3.2%	9	3.4%	14	6.7%	52	3.5%	19	2.3%	10	1.8%	20
	Other	1.6%	5	3.4%	14	0.7%	6	0.9%	5	1.1%	6	0.9%	10
	Total	**100.0%**	**279**	**100.0%**	**407**	**100.0%**	**775**	**100.0%**	**549**	**100.0%**	**459**	**100.0%**	**1,118**
Vehicle Occupancy	Auto	1.9		1.7		1.9		1.6		1.9		2.2	
	Taxi	1.9		1.7		2.0		3.0		3.0		2.5	
	Limo	n/a		n/a		n/a		n/a		n/a		n/a	
SE S.F.	Percent	10.2%		9.7%		14.3%		10.6%		13.3%		8.9%	
	Auto	25.0%	125	28.6%	120	43.5%	446	25.0%	173	36.4%	264	26.1%	347
	Taxi	1.8%	9	0.0%	0	3.4%	35	2.8%	19	7.1%	52	0.7%	10
	MUNI	24.1%	120	38.5%	162	13.6%	139	34.0%	235	22.9%	166	26.9%	356
	BART	6.3%	31	9.9%	42	11.3%	116	6.9%	48	14.3%	104	14.2%	188
	Walk	39.3%	196	15.4%	65	21.5%	220	25.0%	173	14.3%	104	30.6%	406
	Other	3.6%	19	7.7%	31	6.8%	70	6.3%	44	5.0%	37	1.5%	19
	Total	**100.0%**	**500**	**100.0%**	**420**	**100.0%**	**1,026**	**100.0%**	**692**	**100.0%**	**727**	**100.0%**	**1,326**
Vehicle Occupancy	Auto	2.2		1.6		2.4		1.8		1.9		2.7	
	Taxi	2.2		1.6		1.2		1.2		1.7		2.0	
	Limo	n/a		n/a		n/a		n/a		n/a		n/a	

SOURCE: KORVE ENGINEERS

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Pacific Center

Retail Mode Split Summary

Table C-5 (2 of 4)

Origins	Mode Split	Typical Weekday Midday		Typical Weekday P M		Typical Weekend Midday		Holiday Weekday Midday		Holiday Weekday P M		Holiday Weekend Midday	
		Percent	Trips	Percent	Trips	Percent	Trips	Percent	Trips	Percent	Trips	Percent	Trips
NW S.F.	Percent	10.4%		13.3%		14.6%		11.6%		14.2%		9.9%	
	Auto	31.6%	161	28.8%	166	39.4%	413	34.8%	264	34.0%	264	37.2%	548
	Taxi	0.0%	0	2.4%	14	2.2%	23	1.3%	10	2.0%	15	3.4%	49
	MUNI	44.7%	228	48.0%	276	33.9%	355	48.1%	364	49.3%	383	43.9%	648
	BART	9.6%	49	8.0%	46	3.3%	35	4.4%	33	4.0%	31	2.0%	30
	Walk	9.6%	49	8.8%	51	18.9%	198	8.9%	67	6.7%	52	9.5%	140
	Other	4.4%	22	4.0%	23	2.2%	23	2.5%	19	4.0%	31	4.1%	60
	Total	100.0%	509	100.0%	576	100.0%	1,047	100.0%	757	100.0%	776	100.0%	1,475
Vehicle Occupancy	Auto	1.3		1.7		1.2		2.3		1.8		2.3	
	Taxi	1.3		4.0		1.3		3.0		1.3		2.0	
	Limo	n/a		n/a		n/a		n/a		n/a		n/a	
NE S.F.	Percent	28.3%		36.3%		28.3%		28.1%		35.4%		22.2%	
	Auto	16.1%	223	14.3%	225	13.4%	272	18.0%	331	13.7%	264	14.1%	466
	Taxi	0.0%	0	0.9%	14	4.6%	93	2.1%	38	1.3%	25	2.7%	89
	MUNI	20.3%	282	14.9%	235	15.4%	313	20.8%	381	24.4%	471	17.4%	576
	BART	2.9%	40	2.3%	37	2.0%	41	3.4%	62	1.3%	25	2.1%	70
	Walk	56.8%	787	63.2%	993	58.6%	1,188	52.1%	956	55.8%	1,081	30.0%	994
	Other	3.9%	54	4.4%	69	6.0%	122	3.6%	66	3.5%	69	33.6%	1,113
	Total	100.0%	1,386	100.0%	1,573	100.0%	2,029	100.0%	1,834	100.0%	1,935	100.0%	3,308
Vehicle Occupancy	Auto	1.4		1.6		1.0		1.8		1.6		2.0	
	Taxi	1.4		2.0		1.2		1.4		2.2		1.4	
	Limo	n/a		n/a		2.0		n/a		n/a		n/a	

SOURCE: KORVE ENGINEERS

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Pacific Center

Retail Mode Split Summary

Table C-5 (3 of 4)

Origins	Mode Split	Typical Weekday Midday Percent	Typical Weekday Midday Trips	Typical Weekday P M Percent	Typical Weekday P M Trips	Typical Weekend Midday Percent	Typical Weekend Midday Trips	Holiday Weekday Midday Percent	Holiday Weekday Midday Trips	Holiday Weekday P M Percent	Holiday Weekday P M Trips	Holiday Weekend Midday Percent	Holiday Weekend Midday Trips
North Bay	Percent	4.4%		3.5%		3.6%		6.9%		6.0%		4.7%	
	Auto	50.0%	108	84.8%	129	82.2%	214	57.4%	260	77.8%	254	74.3%	521
	Taxi	0.0%	0	0.0%	0	0.0%	0	0.0%	0	1.6%	5	1.4%	10
	GG Bus	16.7%	36	9.1%	14	11.1%	29	11.7%	52	4.8%	15	10.0%	69
	Ferry	6.3%	13	3.0%	4	4.4%	12	13.8%	62	12.7%	42	7.1%	50
	Other	27.0%	59	3.0%	5	2.2%	6	17.0%	77	3.2%	10	7.1%	50
	Total	100.0%	216	100.0%	152	100.0%	261	100.0%	451	100.0%	326	100.0%	700
Vehicle Occupancy	Auto	1.5		1.3		2.2		1.5		1.7		1.6	
	Taxi	1.5		1.3		2.2		1.5		2.0		2.0	
	Limo	n/a		n/a		n/a		n/a		n/a		n/a	
Peninsula	Percent	8.4%		11.0%		10.4%		13.4%		14.1%		18.2%	
	Auto	48.9%	200	53.4%	255	70.5%	526	52.5%	458	73.0%	564	66.8%	1,812
	Taxi	0.0%	0	1.9%	9	1.6%	11	1.6%	14	2.0%	15	0.7%	19
	MUNI	15.2%	63	11.7%	56	7.8%	58	13.1%	115	7.4%	57	10.9%	297
	BART	21.7%	89	18.4%	88	12.4%	92	12.6%	110	10.1%	78	12.0%	327
	CalTrain	7.6%	31	9.7%	46	3.1%	23	10.4%	91	4.1%	31	2.2%	59
	SamTrans	1.1%	4	2.9%	14	0.8%	6	6.6%	58	2.0%	15	1.1%	30
	Other	5.4%	24	1.9%	10	3.9%	29	3.3%	29	1.4%	10	6.2%	168
	Total	100.0%	411	100.0%	478	100.0%	745	100.0%	875	100.0%	770	100.0%	2,712
Vehicle Occupancy	Auto	1.7		1.7		2.4		2.1		2.0		2.7	
	Taxi	1.7		1.7		2.5		3.0		2.0		2.0	
	Limo	n/a		n/a		n/a		n/a		n/a		n/a	

SOURCE: KORVE ENGINEERS

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Pacific Center
Retail Mode Split Summary

Table C-5 (4 of 4)

Origins	Mode Split	Typical Weekday Midday		Typical Weekday P M		Typical Weekend Midday		Holiday Weekday Midday		Holiday Weekday P M		Holiday Weekend Midday	
		Percent	Trips	Percent	Trips	Percent	Trips	Percent	Trips	Percent	Trips	Percent	Trips
East Bay	Percent	32.8%		16.8%		17.9%		21.0%		8.6%		28.6%	
	Auto	42.4%	677	42.4%	309	51.8%	664	35.0%	480	54.9%	259	55.2%	2,355
	Taxi	0.0%	0	0.0%	0	0.0%	0	0.3%	4	0.0%	0	1.2%	49
	BART	51.3%	819	51.3%	373	44.6%	572	48.6%	667	37.4%	175	36.7%	1,562
	AC Transit	5.7%	91	5.7%	41	2.3%	29	8.4%	115	4.4%	21	4.2%	178
	Ferry	0.0%	0	0.0%	0	0.5%	6	0.0%	0	0.0%	0	0.0%	0
	Other	0.6%	10	0.6%	6	0.9%	12	7.7%	107	3.3%	15	2.8%	119
	Total	100.0%	1,597	100.0%	729	100.0%	1,283	100.0%	1,373	100.0%	470	100.0%	4,263
Vehicle Occupancy	Auto	1.6		1.7		2.1		1.7		2.0		2.7	
	Taxi	1.6		1.7		2.1		2.0		2.0		2.6	
	Limo	n/a		n/a		n/a		n/a		n/a		n/a	

Note: n/a – not applicable

SOURCE: KORVE ENGINEERS

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Office Mode Split Summary

Table C-6

Origins	Mode Split	Typical Weekday P M Percent	Typical Weekday P M Trips	Origins	Mode Split	Typical Weekday P M Percent	Typical Weekday P M Trips	Origins	Mode Split	Typical Weekday P M Percent	Typical Weekday P M Trips
SW S.F.	Percent	9.4%		**NE S.F.**	Percent	36.3%		**East Bay**	Percent	16.8%	
	Auto	37.5%	6		Auto	14.3%	9		Auto	42.4%	12
	Taxi	0.0%	0		Taxi	0.9%	1		Taxi	0.0%	0
	MUNI	48.9%	7		MUNI	14.9%	9		BART	51.3%	15
	BART	6.6%	1		BART	2.3%	1		AC Transi	5.7%	2
	Walk	3.4%	1		Walk	63.2%	39		Ferry	0.0%	0
	Other	3.4%	1		Other	4.4%	2		Other	0.6%	0
	Total	**100.0%**	**16**		**Total**	**100.0%**	**61**		**Total**	**100.0%**	**29**
Vehicle	Auto	1.7		**Vehicle**	Auto	1.6		**Vehicle**	Auto	1.7	
Occupancy	Taxi	1.7		**Occupancy**	Taxi	2.0		**Occupancy**	Taxi	1.7	
	Limo	n/a			Limo	n/a			Limo	n/a	
SE S.F.	Percent	9.7%		**North Bay**	Percent	3.5%					
	Auto	28.6%	5		Auto	84.8%	5				
	Taxi	0.0%	0		Taxi	0.0%	0				
	MUNI	38.5%	6		GG Bus	9.1%	1				
	BART	9.9%	2		Ferry	3.0%	0				
	Walk	15.4%	2		Other	3.0%	0				
	Other	7.7%	1		**Total**	**100.0%**	**6**				
	Total	**100.0%**	**16**								
Vehicle	Auto	1.6		**Vehicle**	Auto	1.3					
Occupancy	Taxi	1.6		**Occupancy**	Taxi	1.3					
	Limo	n/a			Limo	n/a					
NW S.F.	Percent	13.3%		**Peninsula**	Percent	11.0%					
	Auto	28.6%	6		Auto	53.4%	10				
	Taxi	2.4%	1		Taxi	1.9%	0				
	MUNI	48.0%	11		MUNI	11.7%	2				
	BART	8.0%	2		BART	18.4%	4				
	Walk	8.8%	2		CalTrain	9.7%	2				
	Other	4.0%	1		SamTrans	2.9%	1				
	Total	**100.0%**	**23**		Other	1.9%	0				
					Total	**100.0%**	**19**				
Vehicle	Auto	1.7									
Occupancy	Taxi	4.0		**Vehicle**	Auto	1.7					
	Limo	n/a		**Occupancy**	Taxi	1.7					
					Limo	n/a					

SOURCE: KORVE ENGINEERS

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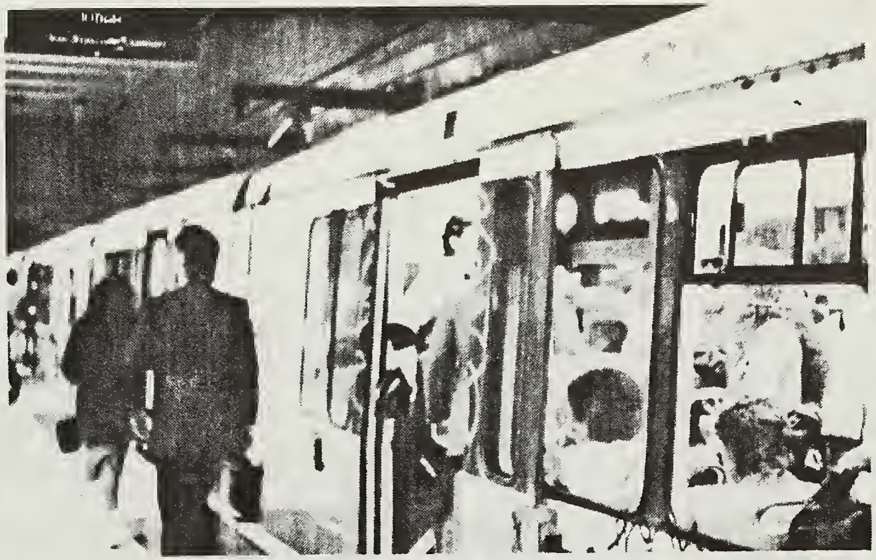
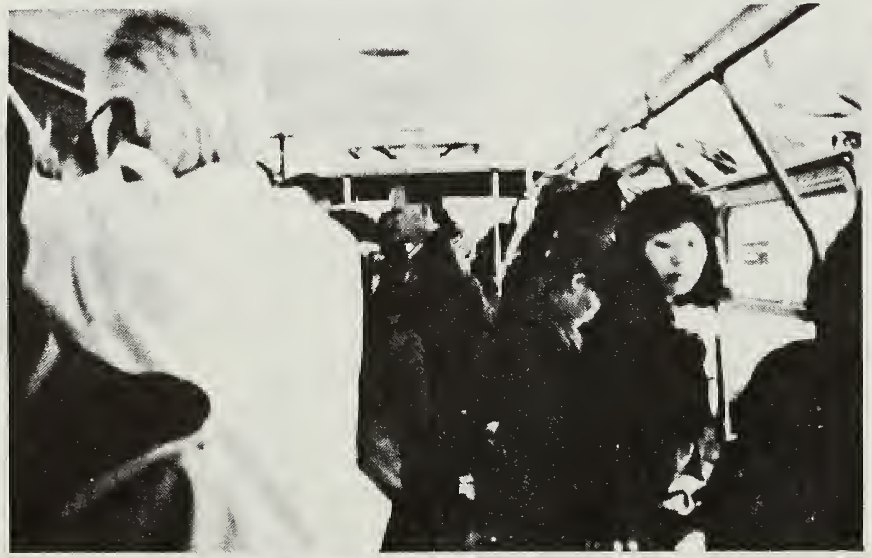
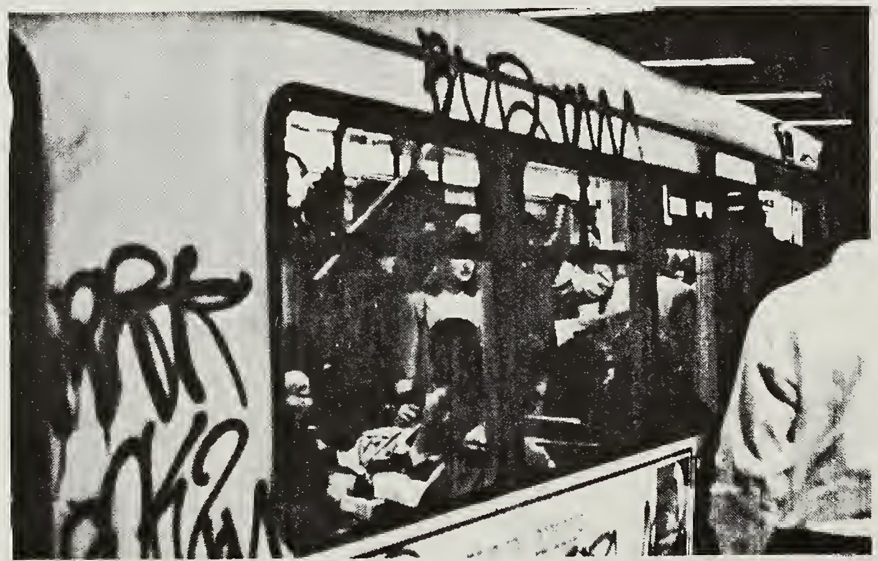
INBOUND **N-JUDAH** – Duboce and Church
8:30 a.m., Wednesday, March 21, 1990



OUTBOUND **N-JUDAH** – Van Ness Station
5:30 p.m., Tuesday, March 20, 1990



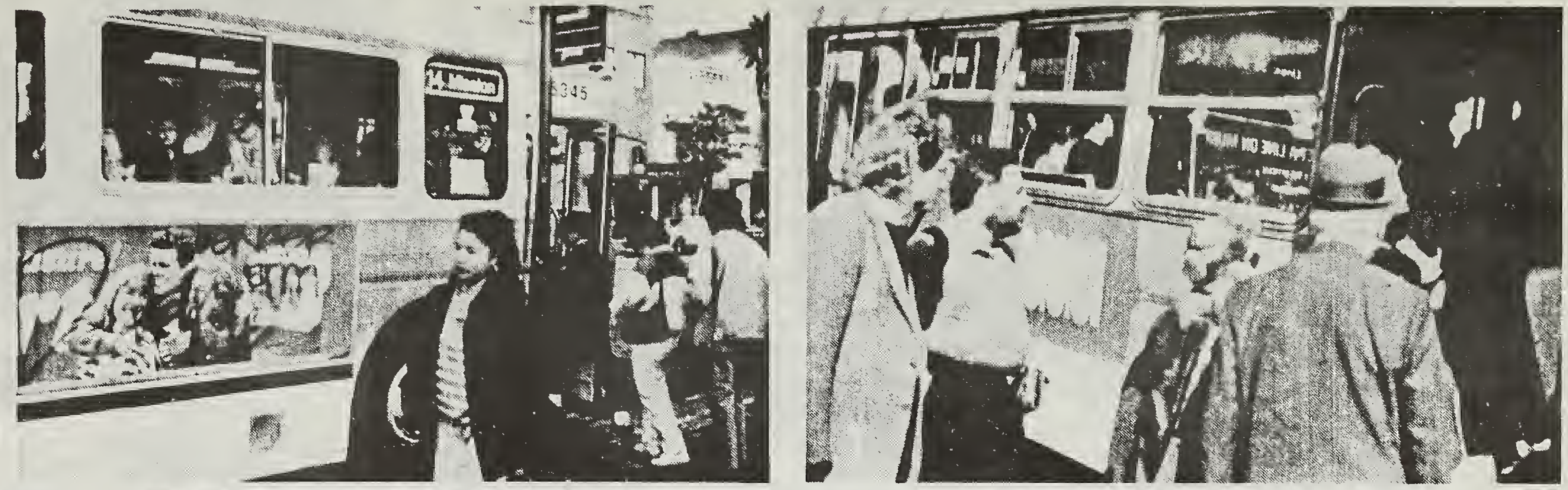
INBOUND **38L-GEARY** – Van Ness and O'Farrell
8:35 a.m., Thursday, March 22, 1990



OUTBOUND **L-TARAVAL** – Van Ness Station
5:25 p.m., Tuesday, March 20, 1990

SOURCE: Environmental Science Associates, Inc.

Figure C-1
Photos of Muni Peak Loading Conditions

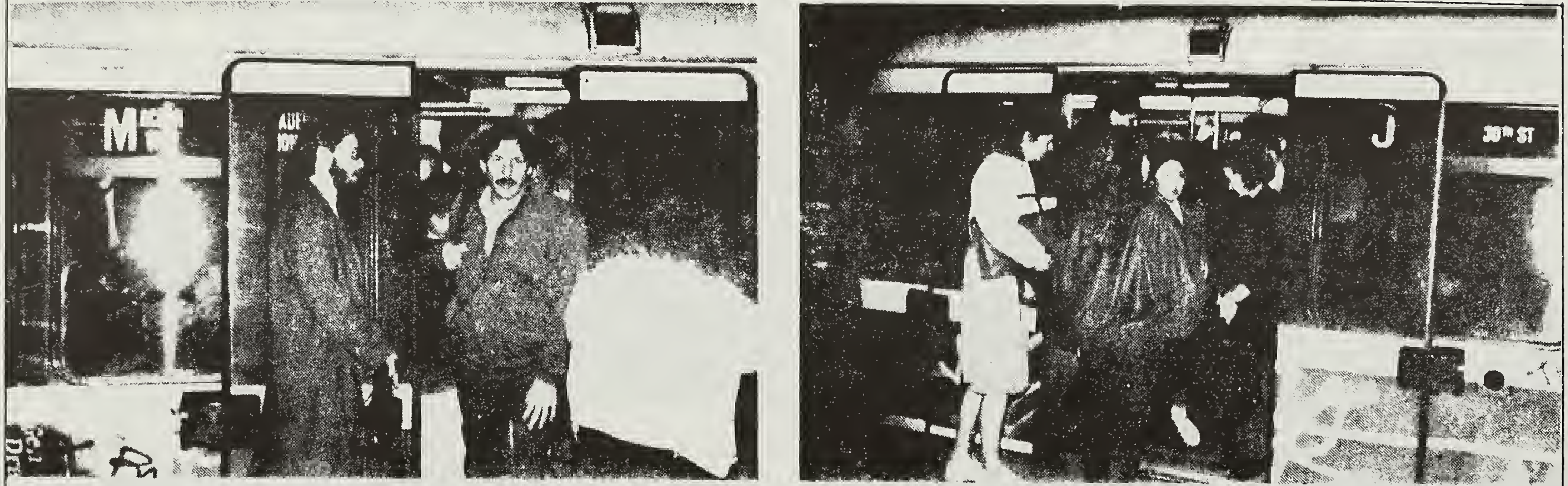


INBOUND **14-MISSION** -- Mission and 24th Streets
7:35 a.m., Thursday, March 29, 1990

INBOUND **38L-GEARY** – O'Farrell and Van Ness
8:35 a.m., Thursday, March 29, 1990

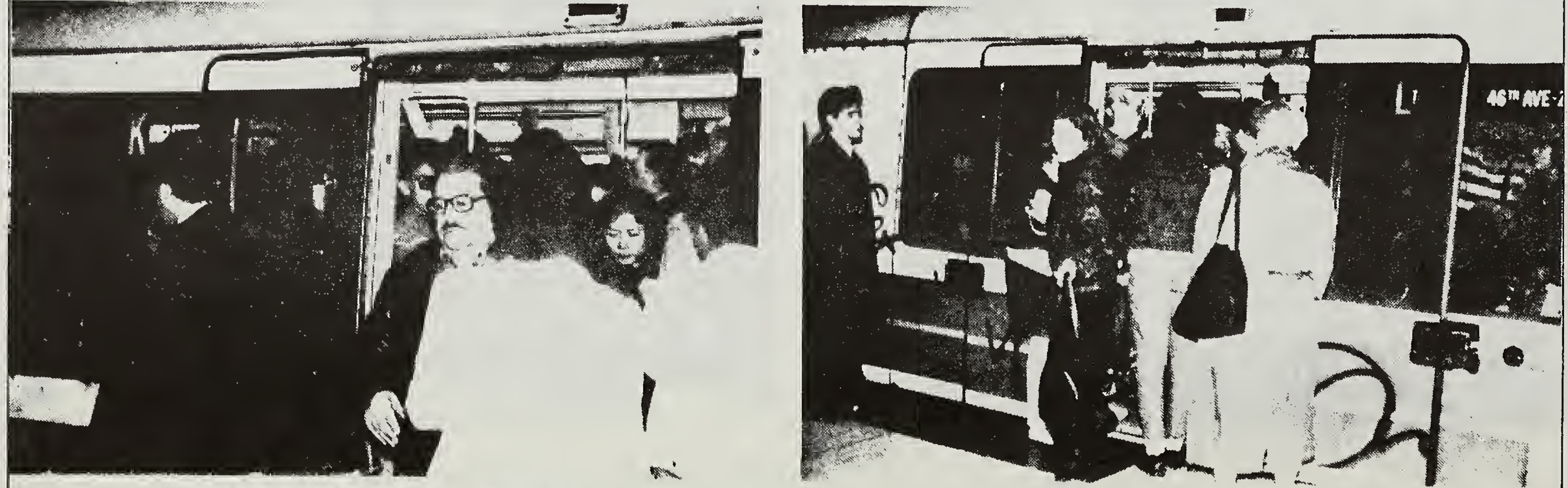
SOURCE: Environmental Science Associates, Inc.

Figure C-1 (continued)
Photos of Muni Peak Loading Conditions



INBOUND M-OCEANVIEW – Civic Center Station
7:45 am, Thursday, March 29, 1990

OUTBOUND J-CHURCH – Van Ness Station
5:20 pm, Thursday, March 29, 1990



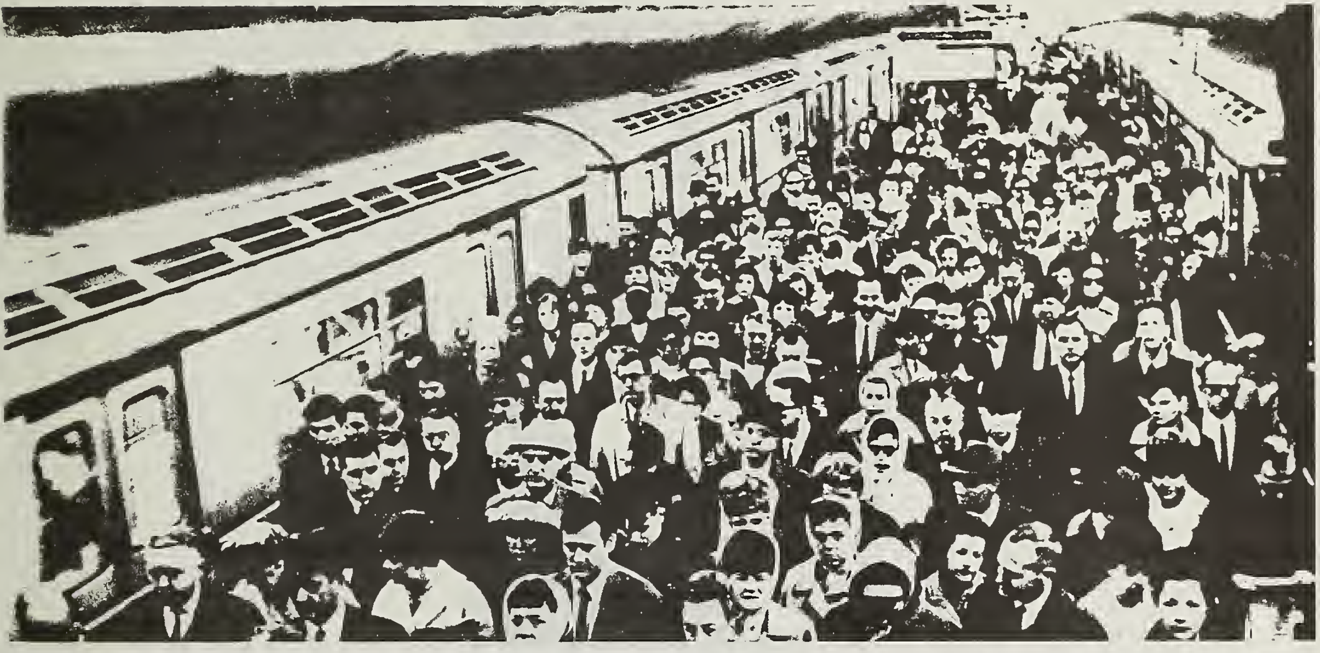
INBOUND K-INGLESIDE – Civic Center Station
7:55 am, Thursday, March 29, 1990

OUTBOUND L-TARAVAL – Van Ness Station
5:45 pm, Thursday, March 29, 1990

SOURCE : Environmental Science Associates, Inc.

Figure C-1 (continued)
Photos of Muni Peak Loading Conditions

JAMMED FLOW. Space per pedestrian in this view is about 3.8 sq ft (0.35 m^2). This is representative of the lower half of the speed-flow curve, where only shuffling movement is possible and even the extremely uncomfortable maximum flow rate of 25 people per min per ft (82 per m) of walkway width cannot be attained due to lack of space. Photograph by Louis B. Schlivek.



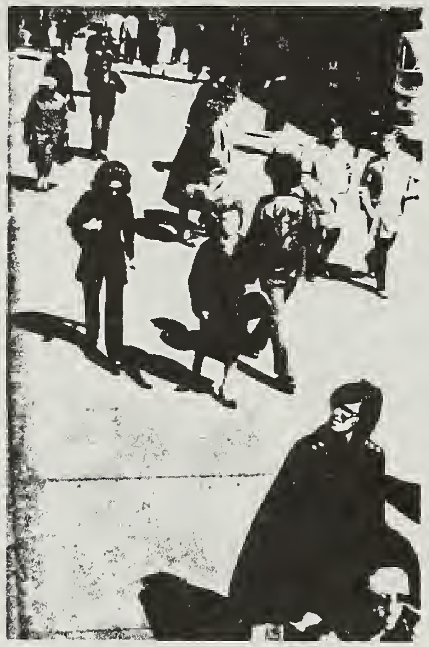
The threshold of CONGESTED FLOW. The first eleven people in the view have about 16 sq ft (1.5 m^2) per person, corresponding to a flow rate of about 15 people per min per ft (49 per m) of walkway width. The beginnings of congestion are evident in bodily conflicts affecting at least three of the walkers, and in blocked opportunities for walking at a normal pace.

The onset of CROWDED FLOW, with an average of about 24 sq ft (2.2 m^2) per person, or a flow rate of about 10 people per min per ft (33 per m) of walkway width. Choice of speed is partially restricted, the probability of conflicts is fairly high, passing is difficult. Voluntary groups of two, of which two can be seen in the picture, are maintained, but cause interference. Note also some overflow into the vehicular roadway in the background.

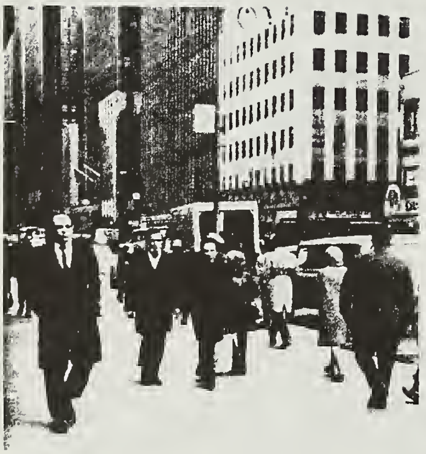
The midpoint of the CONSTRAINED FLOW range, with about 30 sq ft (2.8 m^2) per person, or a flow rate of about 8 people per min per ft (26 per m) of walkway width. The choice of speed is occasionally restricted, crossing and passing movements are possible, but with interference and with the likelihood of conflicts. The man in the dark suit seems to be able to cross in front of the two women in the foreground quite freely, but in the background near the curb people are having difficulty with passing maneuvers.

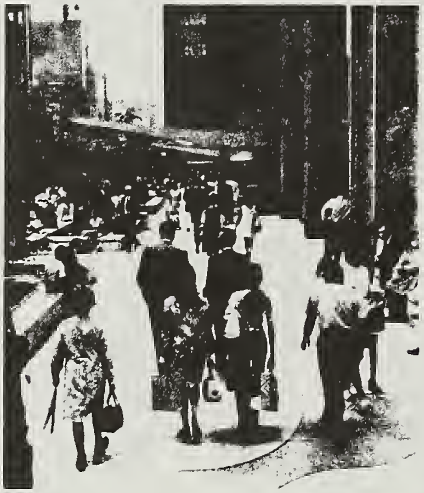
Figure C-2
Photos of Pedestrian Flow Level

SOURCE: PUSKAREV AND ZUPAN



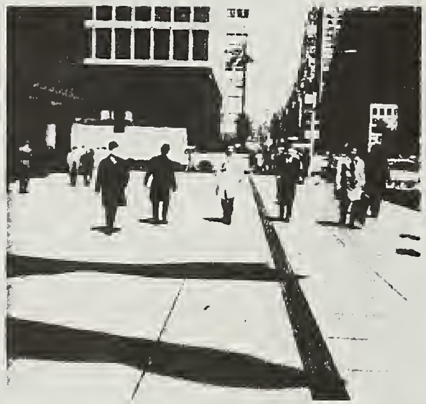
The borderline between IMPEDED and UNIMPEDED FLOW, with about 130 sq ft (12 m^2) per person, or a flow rate of about 2 people per min per ft (6.5 per m) of walkway width. Individuals as well as couples visible in this view have a choice of speed and direction of movement. This rate of flow is recommended for design of outdoor walkways in office districts and other less dense parts of downtown areas.





The uneven nature of UNIMPEDED FLOW. While the people walking in the plaza—which is 17 ft (5.2 m) wide, compared to 23 ft (7 m) in the preceding picture—have almost 130 sq ft (12 m^2) per person on the average, the space allocation for the eight individuals in the foreground is closer to 70 sq ft (6.4 m^2). Thus, indirect interaction with others is still quite frequent in the upper range of UNIMPEDED FLOW.

The midpoint of the IMPEDED FLOW range, with about 75 sq ft (6.9 m^2) per person, or a flow rate of about 4 people per min per ft (13 per m) of walkway width. Physical conflicts are absent, but pedestrian navigation does require constant indirect interaction with others. This rate of flow is recommended as an upper limit for the design of outdoor walkways in shopping districts and other dense parts of downtown areas.



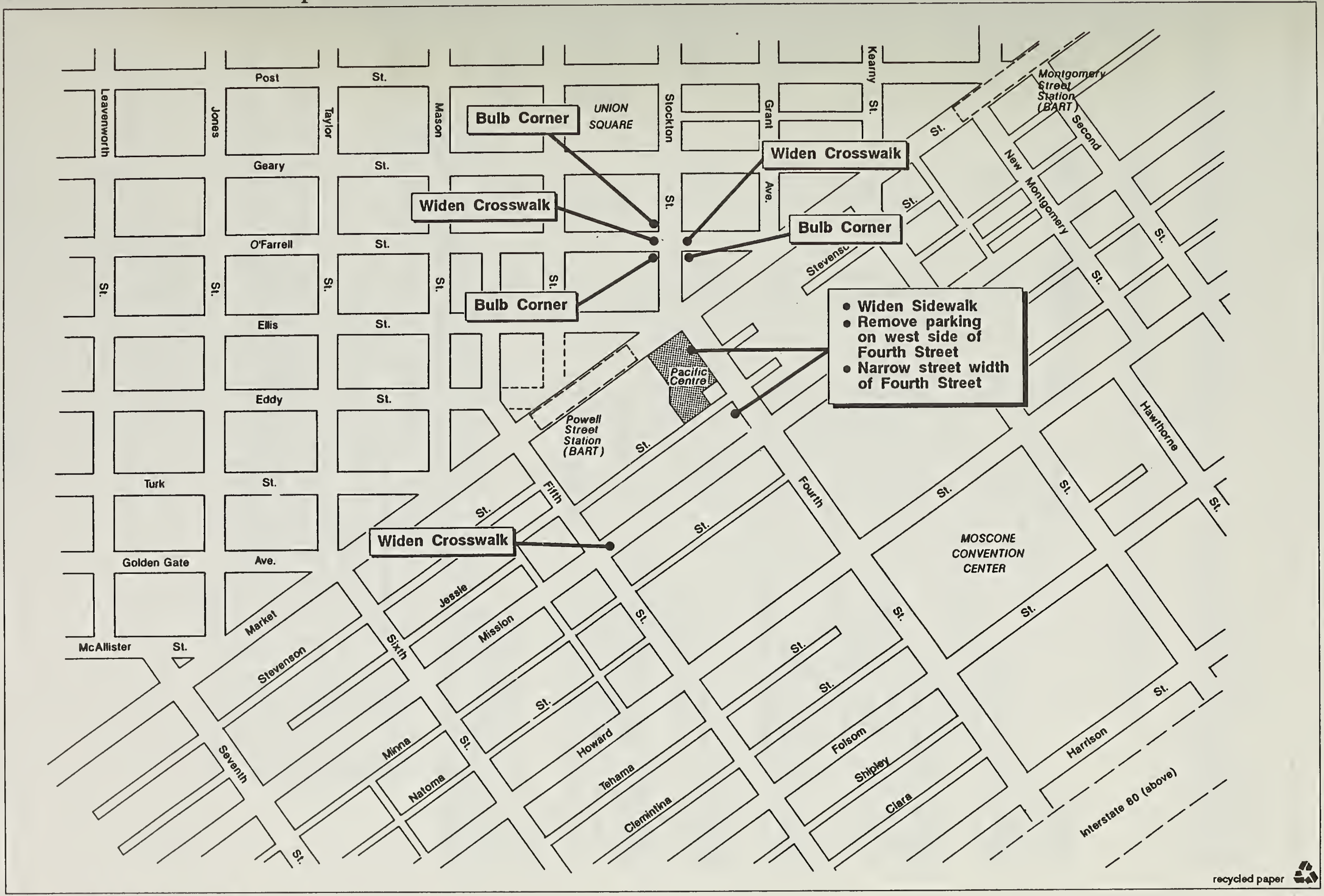
Lower range of UNIMPEDED movement, approaching OPEN FLOW. About 350 sq ft (32.2 m^2) per person, or a flow rate of less than 1 person per min per ft (3.3 per m) of walkway width. Complete freedom to select the speed and direction of movement; individuals behave quite independently of each other. For a design standard based solely on pedestrian density, this amount of space can be considered excessive.

SOURCE: PUSKAREV AND ZUPAN

Figure C-2 (Cont'd)
Photos of Pedestrian Flow Level

Recommended Pedestrian Improvement Measures

Figure C-3



Bulb Corner

Widen Crosswalk

Bulb Corner

Widen Crosswalk

Bulb Corner

- Widen Sidewalk
- Remove parking on west side of Fourth Street
- Narrow street width of Fourth Street

Widen Crosswalk

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SOURCE: KORVE ENGINEERING, INC.

NO SCALE

APPENDIX D: AIR QUALITY

TABLE D-1

SAN FRANCISCO AIR POLLUTANT SUMMARY, 1987-1990

		Monitoring Data by Year[1]			
Pollutant	Standard	1987	1988	1989	1990
Ozone (O_3)					
Highest 1-hr average, ppm[2]	0.09[3]	0.09	0.09	0.08	0.06
Number of standard excesses		0	0	0	0
Carbon Monoxide (CO)					
Highest 1-hr average, ppm	20.0[3]	17.0	15.0	14.0	12.0
Number of standard excesses		0	0	0	0
Highest 8-hr average, ppm	9.0[3]	**10.00**	**12.8**	9.0	6.9
Number of standard excesses		1	1	0	0
Nitrogen Dioxide (NO_2)					
Highest 1-hr average, ppm	0.25[3]	0.15	0.12	0.14[5]	0.11[5]
Number of standard excesses		0	0	0	0
Sulfur Dioxide (SO_2)					
Highest 24-hr average, ppm	0.05[4,6]	0.010	0.013	0.017	0.012
Number of standard excesses		0	0	0	0
Particulate Matter - 10 Micron (PM_{10})					
Highest 24-hr average, $\mu g/m^{3/2/}$	50[3]	**65**	**117**	**101**	**165**
Number of standard excesses[7]		4	5	13	12
Annual geometric mean, $\mu g/m^3$	30[3]	21.7	23.1	**31.6**	27.8
Lead (Pb)					
Highest 30-hr average, $\mu g/m^3$	1.5[4]	0.10	0.16	0.09	0.06
Number of standard excesses		0	0	0	0

NOTES: NR = not recorded; NA = not applicable; **bolded** values indicate violations of standards.

[1] CO data were collected at the BAAQMD monitoring station at 939 Ellis Street; all other data were collected at the Arkansas Street station.

[2] ppm = parts per million; $\mu g/m^3$ = micrograms per cubic meter.

[3] State standard, not to be exceeded.

[4] State standard, not to be equaled or exceeded.

[5] Data presented are valid, but incomplete in that an insufficient number of valid data points were collected to meet EPA and/or ARB criteria for representativeness.

[6] State standard applies at locations where state 1-hour ozone or particulate standards are violated. Federal standard of 365 $\mu g/m^3$ applies elsewhere.

[7] Measured every six days.

Source: California Air Resources Board, *Air Quality Data Summaries*, 1987-1990.

APPENDIX E: TYPICAL NOISE LEVELS

TABLE E-1: TYPICAL NOISE LEVELS

	Decibels	
	110	Pile driver (from 50 feet)
Very Loud	100	
		Light helicopter take-off (from 125 feet)
	90	
		Diesel truck (from 50 feet)
	80	
		Radio or TV playing in living room
Loud		
	70	
		Passenger car on city street (from sidewalk)
	60	
Quiet	50	
	40	
		Whisper
Very Quiet		
		Rustle of paper
	30	

Source: Department of City Planning, "A Proposal for Citizen Review: Transportation Noise, Environmental Protection Element of the Comprehensive Plan of San Francisco," August 1984.

Donald Ballanti
Certified Consulting Meteorologist

1424 Scott Street
El Cerrito, Ca. 94530
(415) 234-6087
Fax: (415) 232-7752

February 4, 1992

Steve Appleton
EIP Associates
150 Spear Street, Suite 1500
San Francisco, CA. 94105

Subject: Wind Impact Evaluation of the Proposed Pacific III Tower and Pacific Centre Projects, San Francisco

Dear Mr. Appleton:

This letter summarizes my findings and recommendations concerning probable impacts on the wind environment due to the proposed projects. I have based my findings on a site visit, a review of project plans, and limited wind tunnel tests of the site with and without the proposed additions.

Factors that Determine Wind Effects

Winds in San Francisco are generally from the west, off the Pacific Ocean. Windspeeds, in general, are greatest in the spring and summer, and least in fall. Daily variation in windspeed is evident, with the strongest wind in the late afternoon and lightest winds in the morning.

Ground-level wind accelerations near buildings are controlled by exposure, massing and orientation. Exposure is a measure of the extent that the building extends above surrounding structures into the wind stream. A building that is surrounded by taller structures is not likely to cause adverse wind accelerations at ground level, while even a small building can cause wind problems if it is freestanding and exposed.

Massing is important in determining wind impact because it controls how much wind is intercepted by the structure and whether building-generated wind accelerations occur above-ground or at ground level. In general, slab-shaped buildings have the greatest potential for wind problems. Buildings that have an unusual shape or utilize set-backs have a lesser effect. A general rule is that the more complex the building is geometrically, the lesser the probable wind impact at ground level.

Orientation determines how much wind is intercepted by the structure, a factor that directly determines wind acceleration. In general, buildings that are oriented with their wide axis across the prevailing wind direction will have a greater impact on ground-level winds than a building oriented with its long axis along the prevailing wind direction.

Project Description

The proposed project site is the southwest corner of the intersection of Fourth Street and Market Street in downtown San Francisco. The Pacific I and Pacific II structures occupy the site. The surrounding area contains numerous highrise buildings and mid-rise commercial buildings.

The proposed Pacific III project would involve construction of a 10-story office tower fronting Jessie Street. A 30-story tower was proposed earlier for this site. The wind effects of this 30-story tower were evaluated previously, and the design was found to "not appear to have the potential for adverse effects on pedestrian comfort", based on the geometry of the proposed structure and the surrounding buildings.[1]

The Pacific Centre Project would create a multi-level mall within the existing Pacific I structure. The exterior of the Pacific I building would unchanged except at the corner of 4th Street and Market Street, where a new entry and ramp would be created.

Analysis of Probable Wind Impacts

For the same reasons cited for the 30-story proposal, the 10 story Pacific III building would not be expected to adversely impact pedestrian winds. At 10 stories the current proposed building would be sheltered from prevailing winds by taller structures.

The Pacific Centre proposal has only limited potential for changing winds, since the building exterior would be largely unchanged. The area that could be affected the most is near the corner of Market and Fourth Street. Limited wind tunnel tests were conducted for the sidewalk areas adjacent the Pacific I building to determine project impacts on pedestrians. These tests were limited because the minor changes associated with the project would not result in changes to the wind environment very far from the corner of the building.

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[1] Letter from Don Ballanti to Russell Faurebrac dated 4 November 1980.

The 11 measurement points tested are shown in Figure 1. Table 1 shows the results of the wind tunnel tests for these 11 sidewalk measurement points. It can be seen that the project would cause shifts in the wind, particularly near the corner. The creation of the new entrance evidently causes changes in the wind patterns.

In terms of relation to the San Francisco Wind Code, 5 of the 11 measurement points exceed the 11 MPH comfort criterion for sidewalk areas. With the Pacific Centre project again 5 of the 11 locations would exceed the criterion. The pattern of wind changes, so that some points would experience higher winds and others would experience lower winds, but the overall wind environment is unchanged. Therefore, the Pacific Centre project appears to not adversely affect the wind environment within pedestrian areas adjacent the site.

I hope that this analysis provides you with all the information you need. If you have any questions about this analysis, please call.

Sincerely,

Donald Ballanti
Certified Consulting Meteorologist

FIGURE 1: MEASUREMENT POINT LOCATIONS

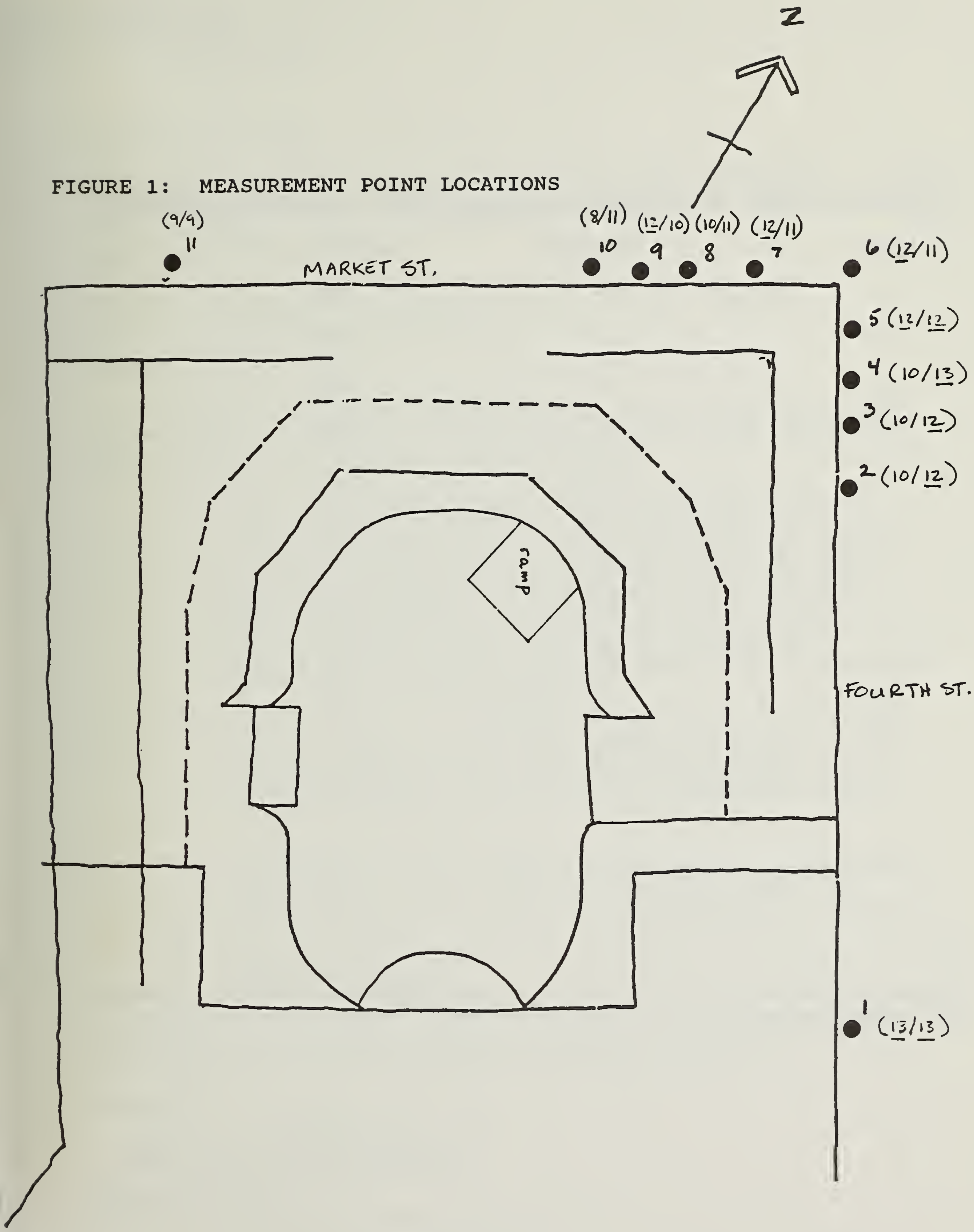

TABLE 1: PREDICTED WIND EXCEEDED 10% OF THE TIME ANNUALLY (90TH PERCENTILE WIND) AT SIDEWALK LOCATIONS WITH AND WITHOUT PROJECT

LOCATION	EXISTING	PROJECT	
1	**13**	**13**	—
2	10	**12**	↑
3	10	**12**	↑
4	10	**13**	↑
5	**12**	**12**	–
6	**12**	11	↓
7	**12**	11	↓
8	10	11	↑
9	**12**	10	↓
10	8	11	↑
11	9	9	–

Values exceeding the San Francisco Wind Ordinance comfort criterion are shown in bold.

ONALD BALLANTI
ETEOROLOGICAL AND
NVIRONMENTAL CONSULTANT

November 4, 1980

Russell Faure-Brac, President
Environmental Impact Planning Corporation
319-11th Street
San Francisco, CA 94103

Subject: Evaluation of Wind Impacts for the Proposed Pacific III Building

Dear Mr. Faure-Brac:

At your request I have visited the project site and reviewed the plans for the proposed building. The building site and geometry suggest the following:

(1) Winds intercepted by the upper portion of the 30-story building would travel downward until they reach the roof of the Pacific II building. The strongest winds near the proposed building would occur at the rooftop of the Pacific II building. Because of existing buildings to the east and west of the building, and the narrowness of Jessie Street, it is unlikely that these accelerated winds would reach the ground.

(2) The location of the maximum winds for the proposed project would be above and generally downwind of the terraces on the Pacific II building. These terraces should not be adversely affected by the Pacific III building.

(3) The Jessie Street sidewalks are the only pedestrian areas near the building. These areas would be offered additional shelter by the proposed building.

(4) Project shadows would not extend to existing pedestrian areas.

In summary, the proposed project does not appear to have the potential for adverse effects on pedestrian comfort. If you have questions concerning these findings, please call.

Sincerely,

Donald Ballanti

Donal Ballanti,
Certified Consulting Meteorologist

1424 Scott Street • El Cerrito. CA 94530 • (415) 234-6087

EIR AUTHORS AND CONSULTANTS; ORGANIZATIONS AND PERSONS CONSULTED

EIR AUTHORS

San Francisco Department of City Planning
450 McAllister Street
San Francisco, CA 94102
Barbara W. Sahm, Environmental Review Officer
Paul Maltzer, EIR Supervisor and Coordinator

EIR CONSULTANTS

EIP Associates
601 Montgomery Street, Suite 500
San Francisco, CA 94111
Terence O'Hare, Principal-in-Charge
Steven M. Appleton, Project Manager
Joe Steinberger, Air Quality, Noise
George Burwasser, Geology, Seismicity

During Associates
582 Market Street #1208
San Francisco, CA 94104
Stu During, Consultant

Square One Film + Video
(Photography and photomontages)
725 Filbert Street
San Francisco, CA 94133
Hartmut Gerdes, President

CADP
(Shadows)
6215 Florio Street
Oakland, CA 94618
Noah Kennedy, President
Scott Hamilton, Associate

Don Ballanti, Certified Meteorologist
(Wind Studies)
1424 Scott Street
El Cerrito, CA 94530

Korve Engineering, Inc.
(Transportation)
155 Grand Avenue, Suite #400
Oakland, CA 94612
Paul Menaker, Ph.D.
Glen A. Price, III

Archeo-Tec
(Cultural Resources)
5283 Broadway Street
Oakland, CA 94618
Allen G. Pastron, Ph.D.

Hygienetics, Inc.
(Asbestos)
2200 Powell Street, Suite #880
Emeryville, CA 94608

Wiss, Janney, Elstner Associates
(Architectural Restoration)
2200 Powell Street, Suite #925
Emeryville, CA 94608
Carolyn L. Searls, Project Manager

Treadwell and Rollo, Inc.
(Geotechnical Engineering)
353 Sacramento Street, Suite 800
San Francisco, CA 94111
Richard D. Rodgers, P.E.
Frank L. Rollo, P.E.

PROJECT SPONSOR

Ahmanson Commercial Development Co.
Pacific Center Associates
155 Grand Avenue, Suite #777
Oakland, CA 94612
Monroe (Mike) Townsend, Jr.

PROJECT ATTORNEY

Pettit & Martin
101 California Street, 35th Floor
San Francisco, CA 94111
Robert Thompson, Esq.

PROJECT ARCHITECT

Whisler-Patri
2 Bryant Street
San Francisco, CA 94105
Piero Patri, AIA
Marie Zeller, AICP
Dean Randall
Tom Harry